

Daniel Reyes Jr.

Forensic Engineering Expertise

Structural Analysis/Design

Damage assessments of building structures after fires, vehicle impact, tree impact, and tornados. Past work involved determining the extent of structural damage to the aforementioned events and to provide conceptual structural repair recommendations.

Origin & Cause

Determine the source and/or responsible party and/or element related to the failure of a structural or architectural element or water damage in a building. Examples of past work include failure of roofing and/or wall cladding causing moisture entry, humidity and condensation-related losses (crawlspaces), and groundwater entry. An example of a past project involved determining the cause of moisture infiltration into the interior of a museum space from a large commercial water fountain.

Building Fenestration/Building Envelope

The building envelope is a building's first line of defense to moisture entry. Identifying the type of system (single versus multiple barrier) and how the various adjoining materials' water and air barriers connect is key to effective moisture management. Past work involved offering opinions and/or repairs to installation deficiencies in claddings, window assemblies, and penetrations in the roof from appurtenances.

Inspection and Evaluation of Roofing Systems

This includes steep and low slope 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.

Civil Engineering

Performed soil borings following the Standard Penetration Test (STP) method aid in determining the geotechnical properties of subsurface soils.

Qualifications & Training

- Scaffolding Use, Guidelines & Application, CPE Solutions, LLC, June 2024
- Tornado Risks and Hazards in Southeastern USA, CPE Solutions, LLC, June 2024
- Understanding Corrosion, Simpson Strong-Tie, April 2024
- Disaster Mitigation, CPE Solutions, LLC, April 2024
- High Winds and High Stakes: Lessons from Recent Field Observations and Other Research Activities on Mitigation Damage from Extreme Wind, Simpson Strong-Tie, April 2024
- Steel Structures to Withstand the Elements: What Structural Engineers Need to Know about Corrosion, American Institute of Steel Construction (AISC), March 2024
- Codes that Safeguard Buildings Under Construction, American Wood Council (AWC), June 2023
- Joist and Joist Girder Reinforcement, Steel Joist Institute (SJI), February 2023

Education

Bachelor of Science in Civil Engineering
The Ohio State University, Columbus, OH
May 2013

Licenses & Certifications

PE - Professional Engineer
Licensed by the State of Ohio - Number PE86841
National Council of Examiners for Engineering and Surveying (NCEES)

Employment History

Forensic Engineer
Nederveld, Inc.
2024 - Present
Duties include forensic engineering analysis relating to building pathology, structural damage due to fire, structural damage from vehicle impacts, storm damage (wind, snow, hail), seismic, and water loss events, calculations, and plan of repair design.

Project Engineer
Envista Forensics, Columbus, OH
2023 - 2024
Performed site inspections to investigate and evaluate the building envelopes in commercial and residential structures due to incidents or natural disasters (loss events). Conducted interviews with the client, insured, contractor, and other pertinent parties to obtain additional information pertaining to the subject claim and/or loss event(s). Prepared written technical reports based on observations made during the inspection. Performed typical project management duties in addition to supporting the clients with technical support as required for the subject claim.

Project Engineer
CT Consultants, Columbus, OH
2022 - 2023
Supported various market groups within the company, including water/wastewater, architectural, and civil. Prepared typical construction administration duties, including but not limited to responding to requests for information (RFIs), reviewing shop drawings, and site inspections. Assisted in preparing project narratives and reviewing proposals for new projects. Performed critical observations for existing buildings and appurtenances. Prepared written reports documenting findings and general recommendations (if applicable) for repair. Assisted in mentoring younger engineers.

Structural Engineering
Shirk & O'Donovan Consulting Engineers, Worthington, OH
2021 - 2022
Analyzed existing building structural components and design dunnage framing for new mechanical unit installations. Prepared calculation packages for both gravity and lateral force resisting systems utilizing steel, masonry, and wood materials. Reviewed shop drawings, responded to RFIs, and performed site visits to check for general conformance with the contract (structural) documents.

Construction Consultant
MKA International, Inc., Dublin, OH
2020 - 2021
Provided support to the construction consultant resource group in assessing and documenting property damage for both commercial and private insurance claims. Provided support to the structural resource group in assessing, documenting, and preparing reports for structural-related damage for both commercial and private insurance claims. Prepared field notes, sketches, and took photographs of the property damage to aid in developing an estimate for the cost of repairs. Developed cost estimates using Xactimate to aid the

client in determining the costs associated with the subject loss and the insured's policy coverage.

Design Engineer

SMBH, Inc., Columbus, OH

2018 - 2020

Provided support to

architects, contractors, and building owners from preliminary design through construction. Utilized various software to design gravity and Lateral Force Resisting Systems and nonstructural components. Prepared construction documents per the applicable building code for the gravity and lateral force resisting system.

Collaborated daily with internal project managers, design engineers, and drafters during all phases of a project. Communicated with architects and other professionals to coordinate drawings and details.

Structural Design Engineer

Kinetics Noise Control, Inc., Dublin, OH

2013 - 2018

Provided technical support to external sales representatives, design professionals, and contractors regarding Kinetics' products and installation procedures. Supported internal project managers, upper-level management, and application engineers regarding structural-related questions and applications.

Assisted in generating submittals, production drawings, and structural connection details when required. Collaborated with sales and manufacturing to address new product development or improve existing products. Prepared prescriptive and computer-generated calculation submittals, incorporating LRFD or ASD design methods, to be reviewed and sealed by a licensed professional engineer.

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