

Jessica Perry, PE

Forensic Engineering Expertise

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 includes failure analysis of impacted structures and various building components.

Origin & Cause

Determine the source and responsible party or element related to the failure of a structural or architectural element, or water damage in a building. Examples of past work include damage to roofing and wall cladding.

Building Fenestration/Building Envelope

The building envelope is a building's first line of defense to moisture entry. Identifying the type of system and how the various adjoining materials' water, vapor, thermal, and air barriers connect is key to effective moisture management.

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.

Qualifications & Training

- Forensic Structural Inspections Introduction, July 2024
- Confined space entry, January 2024
- FUI Pedestrian Bridge Collapse, December 2023
- Open Bridge Workshop, August 2023
- NC LUG Summer Conference Ethics, August 2023
- Earthwork Series-Excavation, January 2022
- Silver Bridge Failure, October 2021
- Mechanical Properties of Wood, July 2021

Education

Bachelor of Science in Civil Engineering – Structural Engineering
North Carolina State University, Raleigh, NC
December 2011

Licenses & Certifications

PE - Professional Engineer

Licensed by the State of Florida - Number 96478

Licensed by the State of West Virginia - Number 025068

Licensed by the State of Virginia - Number 0402065480

Licensed by the State of South Carolina - Number 34687

Licensed by the State of North Carolina – Number 044507

Employment History

Forensic Engineer

Nederveld, Inc.

October 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

Dewberry Engineers, Raleigh, NC

2018 - 2024

Produced structural designs and drawings for vehicular and pedestrian bridges constructed of prestressed concrete, reinforced concrete, steel and/or timber. Designed and analyzed a variety of other transportation structures as well, including culverts, risers, retaining walls, and traffic signal pole foundations. Designed in accordance with state and national code standards, including but not limited to, AASHTO LRFD, AASHTO GSDPB, AASHTO LTS, IBC, DOT, ACI, AISC, and ASCE. Performed pedestrian bridge inspections and generated detailed reports of the assessment. Coordinated with contractors to get shop drawings approved and provided feedback for RFIs.

Staff Engineer

Dewberry Engineers, Raleigh, NC

2015 - 2018

Managed a team of three on a variety of cellular projects, including macro site upgrades, small cell sites, and Distributed Antenna Systems (DAS). Developed erosion control plans for transmission line upgrades and prepared lease exhibits and easement exhibits for Duke Energy.

Structural Analyst

Tower Engineering Professionals, Raleigh, NC

2012 - 2015

Analyzed cellular towers and tower foundations and designed modifications for failing towers and foundations per the governing code requirements, TIA-F, TIA-G, and local codes. Prepared structural reports for analyses and drafted plans for structural modifications. Coordinated with contractors on requests for information during the construction phase. Reviewed post modification inspections and provided feedback. Trained newly hired engineers and cross trained engineers from other departments within the company to analyze and modify monopole, latticed, and guyed towers.