PERSONNEL QUALIFICATIONS

Donald Carroll | Associate Principal and Unit Manager

EDUCATION

- Clarkson University
  - Bachelor of Science, Civil Engineering, 1996
- University of Colorado
  - Master of Science, Civil Engineering, 2003

PRACTICE AREAS

- Litigation Consulting
- Structural Analysis
- Structural Design
- Earth Retention and Foundations
- Failure Analysis
- Repair and Rehabilitation

REGISTRATIONS

- NCEES Record 16-797-05
- Professional Engineer in CO, FL, GA, and LA

PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- American Society of Civil Engineers
- National Council of Structural Engineers Association
- Structural Engineers Association of Colorado

CONTACT

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EXPERIENCE

Donald Carroll's structural engineering practice includes forensic engineering, structural evaluations, and strengthening and repair of distressed structures, foundations, and earth retention structures. His experience was developed through the design, repair, and remediation of new and existing commercial, residential, and industrial structures. Mr. Carroll has experience in the design, evaluation, and repair of structural systems, including steel, wood, masonry, and mild-reinforced, prestressed, or post-tensioned concrete. Prior to joining WJE in 2016, Mr. Carroll was a principal at J.R. Harris and Company, a structural engineering firm in Denver, Colorado.

REPRESENTATIVE PROJECTS

Litigation Consulting

- Four Seasons Vail - Vail, CO: Investigation of alleged structural construction defects in post-tensioned concrete building *
- 195 Bellevue Drive - Boulder, CO: Investigation of alleged design and construction defects on complex multisystem earth retention system *
- Fairways Boca Raton - Boca Raton, FL: Investigation of alleged design and construction defects in concrete balconies
- Red Deck Parking Garage - Atlanta, GA: Review of original foundation design and subsequent design revisions that impacted construction cost and schedule

Structural Analysis

- Lionshead Parking Structure - Vail, CO: Structural condition assessment of precast concrete parking structure and design of repairs for discovered deficiencies *
- Larimer County Fairgrounds - Loveland, CO: Evaluation of nontypical pre-engineered metal buildings that experienced failures during a snowfall *
- Laurel Condominiums - Denver, CO: Analysis of cantilever balconies with proprietary thermal break connectors

Structural Design

- Denver International Airport, AGTS Switch - CO: Installation of new crossover switch in terminal building requiring repurposing of precast prestressed elements, as well as new cast-in-place concrete, structural steel, and deep foundations *

Earth Retention and Foundations

- 1601 Wewatta - Denver, CO: Design of forty-five-foot-deep secant pier cutoff foundation wall in dense urban environment *
- Cherokee - Pueblo, CO: Design of forty-five-foot-deep temporary anchored earth retention system immediately adjacent to active railroad line *
- Expansive Soils - Front Range of CO: Evaluation of numerous residential and commercial structures with foundation movement due to expansive soils

Failure Analysis

- Ritz-Carlton - Vail, CO: Investigation of multiple collapses of micropile retaining walls and construction monitoring of remaining temporary soil nail wall earth retention system *
- Little Nell - Aspen, CO: Investigation of excessive movement in thirty-five-foot-tall anchored retaining wall on the side of Aspen Mountain *

Repair and Rehabilitation

- Saint Michael's Church - Canon City, CO: Design of repairs to unstable wood-framed roof structure that allowed existing roof structure to remain and minimized visual impacts to the space *
- Williams Form - Golden, CO: Design and supervision of program to relevel multispan pre-engineered building frames suffering from more than twelve inches of differential foundation movement *
- Williams Form - Golden, CO: Design of compaction grouting program to stabilize foundations against future movement
- Miami Marine Stadium - FL: Existing condition assessment, including extensive material testing; rehabilitation design of historic structure

** Indicates with previous firm*

TECHNICAL COMMITTEES

- ACI 117 - Specification for Tolerances for Concrete Construction and Materials
- ACI 435 - Control of Deflection in Concrete Structures