

Donald Carroll | Associate Principal



EDUCATION

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

PRACTICE AREAS

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

REGISTRATIONS

- Professional Engineer in CO, FL, KS, LA, and MO
- Structural Engineer in IL

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- Florida Structural Engineers Association
- International Concrete Repair Institute
- National Council of Structural Engineers Association

CONTACT

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EXPERIENCE

Donald Carroll's structural engineering practice includes forensic engineering, structural evaluations, strengthening and repair of distressed structures and foundations, as well as 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*
- Van Zandt Residence - Boulder, CO: Investigation of single-family residence for structural construction defects*
- 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

Structural Analysis

- Atlantic 1 - Aventura, FL: Review of cracking in post-tensioned structural slab
- 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*

Structural Design

- AGTS Switch at Denver International Airport - Denver, 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 cut-off 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; 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 multispans pre-engineered building frames suffering from more than twelve inches of differential foundation movement*
- Williams Form - Golden, CO: Designed compaction grouting program to stabilize foundations against future movement
- The Haven - Kansas City, MO: Investigation and review of differential foundation movement in five apartment buildings under construction; design or repairs using compaction grouting*

**Indicates with previous firm*

TECHNICAL COMMITTEES

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