PERSONNEL QUALIFICATIONS

Francis E. Harrison | Principal

EDUCATION

- The Citadel
  - Bachelor of Science, Civil Engineering, 1980
- University of Colorado
  - Master of Science, Civil Engineering, 1983

PRACTICE AREAS

- Collapsible Soil/Geohazards
- Retaining Walls and Shoring
- Foundation Engineering, Distressed Structures, and Underpinning
- Slope Stability
- Geologic Hazards Assessment and Mitigation
- Retaining Walls
- Public Transportation

REGISTRATIONS

- Professional Engineer in CO

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- Colorado Association of Geotechnical Engineers, board of directors
- Engineering Advisory Board - Jefferson County, CO
- Highway Geology Symposium - present steering committee, organizing committee chair for 2006 symposium

EXPERIENCE

Francis Harrison has broad experience in geotechnical engineering studies and designs in support of building construction, water resource, land development, natural resource development, and transportation projects, especially with challenging, steep, or mountainous terrain. Mr. Harrison provides specialized technical services in retaining wall or shoring design and stability evaluation, distressed structure evaluation and underpinning, slope stability, geologic hazard mitigation, alternatives analysis, and foundation engineering.

REPRESENTATIVE PROJECTS

Collapsible Soils/Geohazards

- Mountain Star Tank - Eagle County, CO: Water tank foundations on collapsible soils; value engineering, design criteria, and construction review of ground conditions *
- Nahal Oz Dam and Reservoir - Ashkelon, Israel: Failure analysis and remedial design for a lined reservoir that had failed due to collapsible soils *
- La Granja Siting Study - Northern Peru: Siting of mine facilities in landslide and karst terrain *
- E-470, Segment IV - CO: Geotechnical investigation and design support for construction of a major roadway segment with bridges and overpasses in wind-blown collapsible soils *
- Boulder County - CO: Numerous flood recovery projects following 2013 floods *

Distressed Structures

- Westview School - Longmont, CO: Assessment of damage, investigation, and oversight of foundation/slab grouting *
- 16th and Platte - Denver, CO: Underpin and shoring review of commercial structure
- Boulder, CO: Underpin of flood-damaged residence *
- Steele and 2nd Avenue - Denver, CO: Underpin and shoring review of commercial structure
- Superior, CO: Micropile underpin of distressed residence *
- Montrose, CO: Micropile underpin of distressed residence *

Slope Stability

- Rocky Mountain Metropolitan Airport - Broomfield, CO: Landslide investigation and remedial design *
- Starkey Gulch Landslide - Parachute, CO: Ground improvement/slope stabilization along gas pipeline *
- Telluride Airport - Telluride, CO: Embankment stability and ground improvement *

Retaining Walls

- Snowcat Bypass Roadway - Vail Mountain, CO: Design of mechanically stabilized earth (MSE) and soil nail walls on a steep mountainside *
- Retaining Wall Repair - Dillon, CO: Investigation of a slope/retaining wall failure; design of staged repair *
- Soil Nail Wall Failure - Mt. Crested Butte, CO: Review, analysis, and report preparation *
- Hillside at Castle Rock - Castle Rock, CO: Design of large block walls and soil nail walls on steep hillside *

Public Transportation

- DeBeque Canyon Landslide - Mesa County, CO: For the Colorado Department of Transportation; emergency response planning, characterization, probabilistic stability model, analysis of mitigation alternatives, and development of a decision model for preferred mitigation alternative *
- FHWA/CFLHD MSE Shoring Studies: Development of procedures and manual for design of MSE walls constructed in front of shored cuts *

** Projects prior to WJE*

CONTACT

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