PERSONNEL QUALIFICATIONS

Josie Boyd | Senior Specialist

EDUCATION

- Kent State University
  - Bachelor of Science, Geology, 2019
- Ohio University
  - Master of Science, Geological Sciences, 2022

PRACTICE AREAS

- Petrography
- Laboratory Evaluations
- Historic Preservation
- Masonry, Stucco, Plaster
- Construction Materials
- Pavement Investigations

CONTACT

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EXPERIENCE

Josie Boyd's work focuses on petrographic examinations and laboratory studies of historic and modern building materials. Her work in the materials laboratory primarily involves the petrographic examination of various building materials, including concrete, mortar, grout, brick, stucco, plaster, and natural and manufactured stone. Ms. Boyd investigates the causes of distress, composition, quality, and compliance with specifications in construction materials. She applies her expertise to diagnose a wide range of material-related issues, such as freeze-thaw distress, fire damage, alkali-silica reaction, surface distress, low-strength issues, staining, and efflorescence.

REPRESENTATIVE PROJECTS

Petrography

- Delaware City Refinery - DE: Evaluation of distressed concrete due to alkali-silica reaction and freeze-thaw distress
- Multiple Locations - US: Airport runway deterioration investigations
- Multiple Locations - US: Evaluation of parking garage concrete and coating systems
- College Museum - OH: Evaluation of distressed terrazzo flooring tiles
- Office Building - Millfield, OH: Testing of concrete masonry unit material properties
- Ferti Technologies - Statesville, NC: Laboratory testing of fire-affected concrete
- Massachusetts Institute of Technology, 57 Alumni Pool - Cambridge: Microscope examination of concrete pool shell
- Duke Reuben-Cooke Building - Durham, NC: Microscope examination of stone masonry
- New Haven City Hall - CT: Petrographic examination of cast stone

Historic Preservation

- Old Point Comfort Lighthouse - Lake Forest, IL: Historic mortar compositional analysis for lighthouse rehabilitation
- Presque Isle State Park, Perry Monument - Erie, PA: Petrographic examination of historic mortar
- Carnegie Hall, Stern Auditorium - New York, NY: Microscopy of historic plaster samples
- Samuel Freeman House - Los Angeles, CA: Laboratory testing of concrete textile blocks from Frank Lloyd Wright-designed house
- Darress Theater - Boonton, NJ: Laboratory studies of historic concrete cores
- Clayton at the Frick - Pittsburgh, PA: Microscope examination of paint samples
- Heinz Chapel Spire - Pittsburgh, PA: Microscope examination of lead-coated copper