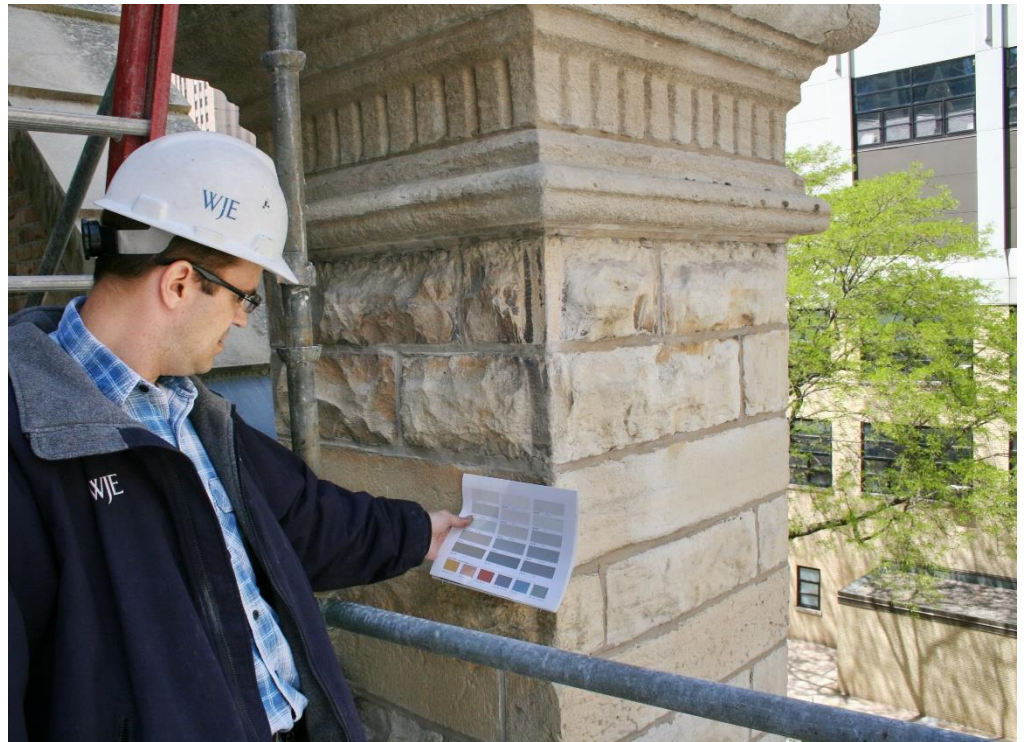


Architectural Finishes and Materials



- Field microscopy
- Metal detection
- Inspection openings
- Borescope observations
- Material sampling and laboratory analysis
- Identification and analysis of coatings and other surface treatments
- Documentation of existing chromachronology and identification of significant finish campaigns
- Laboratory analysis using optical microscopy, scanning electron microscopy (SEM), Fourier transform infrared spectroscopy (FTIR), and x-ray fluorescence (XRF)
- Chemical analysis
- Cleaning studies for plaster, wood, stone, masonry, metal, and other materials

Architectural finishes and materials play an important role in defining a building's character. In new construction, problems with finish materials may indicate hazardous conditions, may be symptoms of underlying problems, or may simply be unsightly. The use, condition, treatment, and finish of materials can be studied to yield important information about a historic structure's evolution and past appearances. WJE professionals have extensive knowledge of material properties and selection, installation methods, and integration detailing for finish materials.

Our experts offer in-house expertise for a full range of investigation, analysis, and design services related to architectural finishes and materials. Existing conditions are assessed in the field and, if necessary, samples can be removed for laboratory analysis in WJE's Janney Technical Center laboratories. We can extract a small sample of the extant finishes, including the substrate, and examine the assembly under magnification to determine the condition and history of the finishes.

WJE professionals regularly assess many finish materials, including stone, brick, tile, metal, wood, art glass, plaster, and stucco. Materials are assessed as components of architectural systems as well as individually to determine the types and sources of distress. Analysis is performed prior to the repair phase to inform in the selection of appropriate repair techniques. Once the material or system has been determined, we often develop restoration approaches that are sensitive to the system's history and character.





SERVICE PROFILE

Architectural Finishes and Materials

REPRESENTATIVE PROJECTS

- Board of Trade Building - Chicago, IL: Evaluation of interior nickel-silver cornice molding and light fixtures; analysis of historic coatings and trial conservation applications
- Eisenhower Executive Office Building - Washington, D.C.: Condition assessment, material studies, documentation, and repair recommendations for interior materials
- Flamingo Visitor Center - Everglades National Park, FL: Condition assessment, documentation, and repair recommendations for interior materials
- Holy Name Cathedral - Chicago, IL: Condition assessment, documentation, coating analysis, and repair recommendations for interior materials
- Howlett State Office Building - Springfield, IL: Reinforcement design and restoration of damaged section of ornamental cast plaster ceiling of historic Hall of Flags
- Illinois State Capitol - Springfield, IL: Condition assessment, documentation, and repair recommendations for interior materials; restoration of House Chamber laylight
- McLean County Courthouse - Bloomington, IL: Condition assessment, documentation, and repair recommendations for interior materials
- North Dakota State Capitol - Bismarck, ND: Condition assessment, documentation, coating analysis, and repair recommendations for interior materials

