

Leonard L. Phelps | Associate Principal



EDUCATION

- University of Illinois
 - Bachelor of Science, Biology, 1979
 - Bachelor of Arts, Chemistry, 1979
- DePaul University
 - Master of Science, Chemistry, 1991

PRACTICE AREAS

- Chemical Analysis
- Coating Analysis
- Construction Documents and Specifications
- Durability Studies
- Failure Investigation
- Condition Assessment
- Laboratory Testing

PROFESSIONAL AFFILIATIONS

- Chicago Society for Coatings Technology
- Society of Protective Coatings

TECHNICAL COMMITTEES

- SSPC C.2.11 Profile Measurement Compliance
- SSPC C.1.12 Painting Galvanized Steel
- SSPC C.1.13 Coatings for Wastewater Facilities

CONTACT

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EXPERIENCE

Leonard Phelps joined WJE as a chemist in 1984. He often serves as lead chemist on various project teams whose task is the resolution of construction-related materials problems. His work experience includes a variety of coating projects, such as failure analysis, condition assessment, specification development/appraisal, remedial coating recommendations, coating characterization, performance evaluation, and long-term durability assessment.

Mr. Phelps routinely consults with clients regarding material acceptability and selection, surface preparation, coating application, specification explication, resolution of disputes, and litigation. He has been principal investigator in determining the cause of the failure of coatings applied to a variety of substrates of various commercial and industrial structures. Mr. Phelps has been a key member of project teams responsible for determining the cause of failure of other construction materials, such as adhesives, sealants, roofing, wallpaper, and fireproofing insulation.

REPRESENTATIVE PROJECTS

Construction Documents and Specifications

- Boulder Recreation Center - Boulder, CO: Coating specification for galvanized pool toys
- Capehart Elevated Water Tank - Whidbey Island, WA: Coating specification interior/exterior steel water tank
- One Market Renovation - San Francisco, CA: Critique of coating specifications for exterior aluminum and structural steel

Durability Studies

- Anheuser Busch - St. Louis, MO: Long-term performance study of roofing membranes for brewhouses
- Federal Highway Administration: Long-term performance study of rebar coatings
- Westmoreland County Courthouse Dome - Greensburg, PA: Long-term performance study of coatings on cast aluminum dome

Failure Investigation

- Aloha Stadium - Honolulu, HI: Pinpoint corrosion of coated galvanized steel
- Combat Training Pool - Great Lakes, IL: Blistering of pool coating system
- Eiffel Tower II - Las Vegas, NV: Cracking of coating system

Condition Assessment

- Bridge of the Americas - Panama City, Panama: Coating condition survey
- Chicago Skyway - Chicago, IL: Coating condition survey
- Sheraton Moana Surfrider Hotel - Honolulu, HI: Coating condition survey

Paint Analysis

- Pave Mark Corporation: Characterization of thermoplastic marking material
- Chicago Housing Authority - Chicago, IL: Characterization of coatings
- Davis Paint Manufacturing: Characterization of zinc-rich coatings