



#### EDUCATION

- Roosevelt University
  - Bachelor of Science, Chemistry, 1986

#### PRACTICE AREAS

- Coatings and Sealants
- Cement and Concrete
- EIFS and Stucco
- Failure/Damage Investigations
- Flooring and Underlayments
- Glass and Stone
- Plastic Pipes and Fittings
- Portland Cement and Admixtures
- Roofing and Waterproofing
- Windows and Curtain Walls

#### PROFESSIONAL AFFILIATIONS

- American Concrete Institute - Illinois Chapter
- Association for Preservation Technology International

#### CONTACT

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#### EXPERIENCE

Richard Cechner joined WJE in 1986 as a chemist with more than ten years of concrete materials and laboratory analytical experience. While at WJE, he has been involved with investigations of polymeric materials, concrete, mortar, coatings, sealant, and adhesive failures. Mr. Cechner is also experienced in the analysis of a wide variety of construction materials.

Mr. Cechner's representative projects include studies of extruded plastic pipe and molded fitting failures; curing problems and adhesive failures of elastomeric joint sealants; identification of deposits on glass and concrete; studies of bond failures of coatings, membranes, and flooring materials using moisture emission evaluations and analyses for bond-inhibiting components; removal of coatings from concrete and stucco; and deterioration investigation of exterior insulation and finish systems (EIFS). He has also conducted cleaning studies of concrete, stone, glass, and coated panel systems, and the analysis of concrete specimens exhibiting setting, workability, and durability problems, including identification and quantification of admixtures.

#### REPRESENTATIVE PROJECTS

##### Failure/Damage Investigations

- Environmental stress cracking of PVC, CPVC, PE, and POM pipes and other plastic products by microscopical and chemical analyses
- Solvent-cemented plastic pipe joint failures

##### Coatings and Sealants

- Adhesive and cohesive failure studies
- Aesthetic problems including staining
- Component identification and proportion analyses
- Detection of bond-inhibiting materials by microscopical and spectroscopical methods
- Determination of chemical and physical properties including tensile bond and peel strength

- Evaluation of materials for repair specifications
- ICRI certification for slab moisture testing
- Substrate composition, concrete moisture vapor emission rate and relative humidity testing

##### Cement and Concrete

- Analyses of surface coatings and treatments
- Chemical analyses of setting time, strength, workability, and durability problems
- Admixture content studies
- Cleaning studies of cast-in-place and precast concrete
- Identification and quantification of forms of sulfate

##### Glass and Stone

- Laboratory testing of stone treatment and consolidation
- On-site and laboratory studies of deposits, streaks, stains, and etching
- Stone and sealant compatibility studies including accelerated stain testing
- Trial cleaning studies and repair recommendations

##### Roofing and Waterproofing

- Identification of membranes, coatings, adhesives, and insulation materials
- Moisture content studies
- On-site and laboratory studies of roofing membranes and coatings