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NICHOLAS B. LEHMANN, PE DIRECTOR, CIVIL/STRUCTURAL ENGINEERING SERVICES

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SPECIALTIES

- Collapse Investigation
- Structural Investigation
- Expert Witness/Litigation Consulting
- Nondestructive Testing
- Construction Documents and Specifications
- Parking Structures
- Modern and Historic Concrete Structures
- Disaster Response

BIOGRAPHY

Nicholas Lehmann is an expert in the field of structural investigation of existing infrastructure. He has investigated, analyzed, and designed repairs for hundreds of steel, concrete, timber, and masonry structures and associated systems, such as waterproofing, sealants, and expansion joints. He specializes in structural damage and collapse investigations, condition assessments, disaster response, construction document preparation and specification writing, and nondestructive testing. After the events of September 11, 2001, Nicholas investigated the World Trade Center site and surrounding buildings for debris impact damage, as well as performed on-site engineering related to the recovery efforts at Ground Zero on behalf of the New York Office of Emergency Management.

Nicholas has extensive experience in the investigation and repair of concrete structures. He has utilized various non-destructive methods to evaluate both modern and historic concrete structures and materials in a variety of locations and environments, including tunnels, water vessels, historic buildings, parking garages, and industrial facilities. He currently serves as President of the International Concrete Repair Institute, Delaware Valley Chapter, and has taught courses on concrete deterioration and repair at the University of Pennsylvania and elsewhere.

QUALIFICATIONS

Cornell University, Master of Engineering, Structural Engineering

Swarthmore College, Bachelor of Science, Engineering

INDUSTRY CERTIFICATIONS, LICENSES AND MEMBERSHIPS

- Professional Engineer in PA
- International Concrete Repair Institute (ICRI)
- American Society of Civil Engineers (ASCE)
- International Concrete Repair Institute (ICRI) Committee 210 – Evaluation
- International Concrete Repair Institute (ICRI) Committee 510 – Corrosion

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PROFESSIONAL EXPERIENCE

- Halliwell, Director, Civil/Structural Engineering Services
- Wiss, Janney, Elstner Associates, Inc., Senior Associate

REPRESENTATIVE ASSIGNMENTS

Collapse Investigation

World Trade Center Buildings 1, 2, 4, and 5 | New York, NY

Debris spread analysis and glass breakage analysis

1100 Race Street Garage | Philadelphia, PA

Investigation of partial collapse of exterior wall due to vehicle impact

Disaster Response

World Trade Center | New York, NY

On-site engineering related to debris removal following September 11, 2001 terrorist attack

Hurricane Katrina | New Orleans, LA

Investigation of hundreds of structures with flood and wind damage

Hurricane Sandy | Various Locations in NY and NJ

Investigation of dozens of flood damaged structures

Nondestructive Testing

Brooklyn Battery Tunnel | Brooklyn, NY

Measurement of five thousand half-cell potentials on the underside of the roadway slab

Walt Whitman and Benjamin Franklin Bridges | Philadelphia, PA

Ultrasonic evaluation of steel rocker/hanger pins

City of Chester Water Storage Tanks | Chester, PA

Corrosion potential survey of reinforced concrete water storage tanks

Construction Documents and Specifications

Fashion Center Parking Deck | Paramus, NJ

Investigation and design of parking deck renovation, including concrete repairs, expansion joint replacement, waterproofing, and asphalt paving

Holiday Inn Historic District Hotel Parking Garage | Philadelphia, PA

Investigation and design of repairs to tendons in post-tensioned floor slabs

AutoPark at Independence Mall Parking Garage | Philadelphia, PA

Investigation and design of concrete and waterproofing repairs

Jefferson Frankford Hospital Parking Garage | Philadelphia, PA

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Condition assessment, emergency repairs, exploratory probes, repair drawings and specifications, bid and construction period services at precast double tee structure

Two Bala Plaza Parking Garage | Bala Cynwyd, PA

Condition assessment, materials testing, half-cell potentials survey, repair drawings and specifications, bid and construction period services at cast-in-place concrete waffle slab structure

Structural Investigation

Municipal Water Tower | Roosevelt, NJ

Investigation and design of repairs to seventy-five-year-old steel water tower

Drexel Armory Building | Philadelphia, PA

Structural condition survey of steel-trussed roof framing

Pencoyd Bridge | Bala Cynwyd, PA

In-depth survey of historic steel truss bridge, including ultrasonic testing, below-water investigation of pier foundations and post-flood damage assessment

West Branch Regional Authority WWTP | Muncy, PA

Condition survey, materials testing, and repair recommendations for four precast, post-tensioned tanks

Penn State University Water Reclamation Facility WWTP | State College, PA

Condition survey, materials testing, repair recommendations at cast-in-place water tanks