Design and Construction of Concrete Parking Structures
ONE DAY, 7.5 HOURS
Design and Build to Last

Program Content:

- **Design and Material Considerations**
  - Selecting the Structural System
  - Good Design Practices for All Types of Construction
  - Designing for Loads
  - Provisions for Forces and Deformations Due to Restraint of Volume Change and Differential Settlement
  - Joints
  - Cracks and Crack Control
  - Drainage Planning and Design
  - Corrosion Resistance
  - Fire Performance (rational design)
  - Future Expansion
  - Lighting
  - Security (life/safety considerations)
  - Stair/Elevator (vertical egress) Shaft Design and Location
  - Specifications for Materials, Construction, and Means and Methods

- **Requirements for Durability**
  - Concrete
  - Additives (silica fume, corrosion inhibitors, and admixtures)
  - Epoxy Coated Reinforcing
  - Concrete Sealers and Waterproofing Systems
  - Membranes
  - Cover of Reinforcing
  - Joint Sealing
  - Protection of Embedded Hardware
  - Sloping for Adequate Drainage (durability design for targeted service life)

- **Design Benefits, Materials, and Construction Considerations**
  - Special Considerations for Precast/Prestressed Concrete
  - Lateral Load-Resisting Systems
  - Cast-in-Place Concrete (post-tensioned systems)
  - General
  - Life Cycle Costs and Service Life Expectation

- **Maintenance for Durability**
  - General
  - Maintenance Schedules and Manuals
  - Condition Audits
  - Repairs

- **Innovations in the Concrete Parking Garage Market**
  - Mixed Use
  - Architectural Considerations

Who should attend:
Designers, material suppliers, contractors, building owners, and maintenance personnel.

Instructors:

Seminar handouts:
- Precast, Prestressed Parking Structures: Recommended Practice for Design and Construction (PCI MNL 129-98)
- Guide for the Design of Durable Concrete Parking Structures (ACI 362.1R)
- Special handout with notes and design examples authored by the instructors