

# POST-TENSIONED CONCRETE BUILDING STRUCTURES - DESIGN FUNDAMENTALS

## SEMINAR - PART 1 OF 2

HALF DAY, 4 HOURS (4 PDHs / 0.4 CEUs)

**Who should attend:** Engineers and architects new to post-tensioned concrete or anyone interested in fundamentals of post-tensioned concrete design.

### Program Content:

#### INTRODUCTION TO PRESTRESSED POST-TENSIONED CONCRETE

- Prestressed concrete and how it is built
- Post-tensioning components
- Applications
- Advantages

#### PT DESIGN FUNDAMENTALS

- Application of prestressing force
- Loading balancing
- Balanced moments
- Primary moments
- Secondary moments and reactions

#### DESIGN FOR VERTICAL GRAVITY LOADS

- Design procedure
- One-way system design
- Two-way system design
- Transfer member design

#### CERTIFICATION AND PTI RESOURCES

- Certification levels and workshops
- PTI resources

#### OPEN Q&A

### Learning Objectives:

- Identify components, applications, and advantages of post-tensioning.
- Understand load balancing concepts and secondary forces due to post-tensioning.
- Understand basic design procedure and considerations for one-way, two-way, and transfer members.
- Recognize applicable code sections and design resources.

### Instructors:

PTI engineers and industry experts

### Related Documents:

*To expand attendees' knowledge, copies of related documents may be purchased at the PTI Store with a one-time special discount of 25% off the regular price. Contact [pti.bookstore@post-tensioning.org](mailto:pti.bookstore@post-tensioning.org) for more details.*

- Guide for Design of Post-Tensioned Buildings (DC20.9-11)
- Field Procedures Manual for Unbonded Single Strand Tendons (M10.3-16)