PTI Technical Committees: Reflecting on 40 Years as We Step to the Future

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Long Beach, California
Presentation Topics

• Reflecting on PTI’s Technical Influence over 40 Years
• The Great Knowledge Transfer
• Looking to the Future of PTI – from Technical Perspective
PTI Early Years

- PTI Established in 1976
- PT Manual 1\textsuperscript{st} Edition Published by Post-Tensioning Division of PCI
- 2\textsuperscript{nd} Edition Published by PTI in 1976
- Working on 7\textsuperscript{th} Edition
Bridges

- Post-Tensioned Box Girder Bridge Manual – 1977
- Precast Segmental Box Girder Bridge Manual – 1978
PTI Early Years

• Slab on Ground
• Developed Design Guide
• 100 Million SF by 1980
PT Industry Over 40 Years
Great Knowledge Transfer

- PT Design Knowhow Closely Held by Few PT Companies
- Reluctance to Educate Designers
- Big Change from 1980’s to Present
- PTI Seminars (18 in one Year)
- PTI Publications
- Availability of Computer Design Software
  - PT Data, Posten, ADAPT
Great Knowledge Transfer

- At first consultants were taught the load balancing method for design
- Later they were taught how to use programs based on equivalent frame method
Great Knowledge Transfer

- Now they are using FE design tools
- Without proper training and experience engineers can get into trouble
- With training and experience they are very powerful
Evolution of PTI Technical Committees

- PTI has produced over 150 technical documents
- Many written by individuals
- Documents were edited by small committees
- Documents were approved by PTI Board of Directors

Legends
Modern Technical Committee Organization

- New Committee Structure under Ted Neff in 2002
- TAB – Florian Barth, Chair
- Rashid Ahmed, Fadi Alkhairi, Joe Ales, Asit Baxi, Dirk Bondy, Ken Bondy, Jim Cagley, Greg Chacos, John Crigler, Cary Kopczynski, Merril Walstad
- 18 Technical Committee
- 1st Technical Conference in San Antonio in 2002
What the Future Holds

Goal 1: Grow and Expand PTI Knowledge Center

Goal 2: Develop Codes that Allow for Innovation and New Markets
PTI Knowledge Center

• Traditional Publications
  – Post-Tensioning Manual
  – Published Guides, Specifications, Tech Notes, FAQs

• Transition to Web Based Learning
  – Electronic documents
  – Webinars
  – E-Learning Modules
  – Construction Training Videos
Foster Environment that Allows for Innovation

- Coordinated Effort with ACI and IBC
- Coordinated Effort with ASBI and FHWA
- Engage Academia
  - Invite professors to join PTI
  - Fund Research
  - Teach the professors how to teach PT

Watergate Built in 1969
Future Innovation

• Highrise Buildings
• 1000 Museum in Downtown Miami
• New York City?
Future Innovation

• Transfer Mats and Podium Slabs
• Surf Club – Miami Beach

Photo Courtesy of VSL
Future Innovation

- Shark Tank – Miami Science Museum
- Three directional bonded PT

Photo Courtesy of VSL
Future – External PT

• Strengthening of 2 Way Flat Plate

• Strengthening of Precast Parking Garage

Photo Courtesy of VSL
Future – External PT

- Fallingwater
- Used PT to arrest sag in cantilevered slabs
Future – Bridges

• Coordinated Effort with ASBI and FHWA
• Push Envelope in Design and Quality
• Recognized as the International Authority for Stay Cable Design and Construction
Thank You!

Questions?