A manufacturing operation...

...not off-site construction!
Pre-CASTING PLANTS

- **Sub-Manufacturing**
  - Batch Plant
  - Reinforcing Bar Shop
  - Steel Fabrication/Weld Shop
  - Wood & Metal Form Fabrication Shop
• Specialized Personnel and Equipment
  – Quality Control Department & Laboratory
  – Engineering Department (Product & Plant)
  – Drafting Department
  – Repair Crews
  – Finishing Crews
• Field Operations
  - Trucking Department
  - Cranes
  - Erection Crews
  - Finishing and Repair
• Unique Membership – International Trade Association & Technical Society

• 320 Manufacturing Plants – US & Canada

• 2,000 Individual Members
  – Professional, Affiliate, Intern, Student

• 160 Supplier Members
• **Chicago**
  - 35 Staff
  - 54 years

• **11 Regional Offices**
  - New England, PA, Mid-Atlantic, Georgia-Carolinas, FL, OH, IL-WI, CA, CO, MN-IA-NE, TX

• **Goal** — “…dramatically enhance the success of the precast prestressed concrete industry in the U.S.”

• **Technical, Education, Marketing, Research**
• **Plant Certification**
  – Differentiates the plant’s capabilities and experience

• **Plant Personnel Certification**
  – Three levels of achievement

• **Field Erector Certification**
  – Field Erector Auditor Certification
Precast/Prestressed Concrete Institute (PCI)

Federal Highway Administration (FHWA)
“Advancement of Precast Prestressed Concrete Pavement System through Technology Transfer and Development of Industry Guidance for Design and Engineering”
– Part A: Strategy for technology transfer
  • agency/owner
  • industry communities

– Part B: Development of industry guidance for design and engineering
• Four-Year Program
• Non-Proprietary
• Manufactured in PCI-Certified Plants
• “Precast Prestressed Concrete Pavements” (PPCP)
• The Transtec Group
  – David Merritt
Program

- Create contacts lists
- ETG
- Program
  - “The National Center for Prestressed Concrete Highway Pavement”
  - Board of Advisors
Program

- Informational Literature
- Program
  - Showcases, Workshops
– **Program**
  - Guidance Documents, Sample Plans, Specifications
Program

- PCI Pavement Committee
  - Develop “action items”
  - Completion timeline

- Industry “guidance” documents for “design and engineering” of the PPCP system
Four “Guidance Documents”
First Document

- Selecting Applications for Precast Concrete Pavements
Second Document

- Design, Layout and Maintenance of Precast Concrete Pavements
Precast Concrete Pavements

PCI-FHWA Cooperative Agreement

Third Document

- Precast Pavement Panel Fabrication Recommendations
– Fourth Document
  • Construction Recommendations for Precast Concrete Pavements
Selecting Applications for Precast Concrete Pavements

- Considerations for Selection
- Types of Applications
- Site Selection
- Agency Considerations
- Resources
- Appendix - Projects
Design, Layout and Maintenance of Precast Concrete Pavements

- Key Features
- Design Considerations
- Pavement Management Considerations
- Performance Monitoring
- Appendix – Details and Specifications
Precast Pavement Panel Fabrication Recommendations

- Producer Qualifications
- Formwork
- Materials
- Prestressing
- Expansion Joints
- Concreting
- Lifting/Handling
- Acceptance Testing
Construction Recommendations for Precast Concrete Pavements

- Installation-Staging
- Base Preparation
- Materials
- Installation-Equipment & Methods
- Post-Tensioning
- Final Surface Finish
- Final Inspection
Cooperative Effort to Engage Industry and Agencies