

***Engaging Industry –  
A Cooperative Approach***

**New Jersey Concrete Pavement Showcase  
Mt. Arlington, New Jersey**

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PCI**



## PRECASTING PLANTS

**A manufacturing operation...**

**...not off-site construction!**



## PRECASTING PLANTS

- **Sub-Manufacturing**
  - **Batch Plant**
  - **Reinforcing Bar Shop**
  - **Steel Fabrication/Weld Shop**
  - **Wood & Metal Form Fabrication Shop**



## PRECASTING PLANTS

- **Specialized Personnel and Equipment**
  - **Quality Control Department & Laboratory**
  - **Engineering Department (Product & Plant)**
  - **Drafting Department**
  - **Repair Crews**
  - **Finishing Crews**



## PRECASTING PLANTS

- **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**



## *PCI Certification Programs*

- **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**

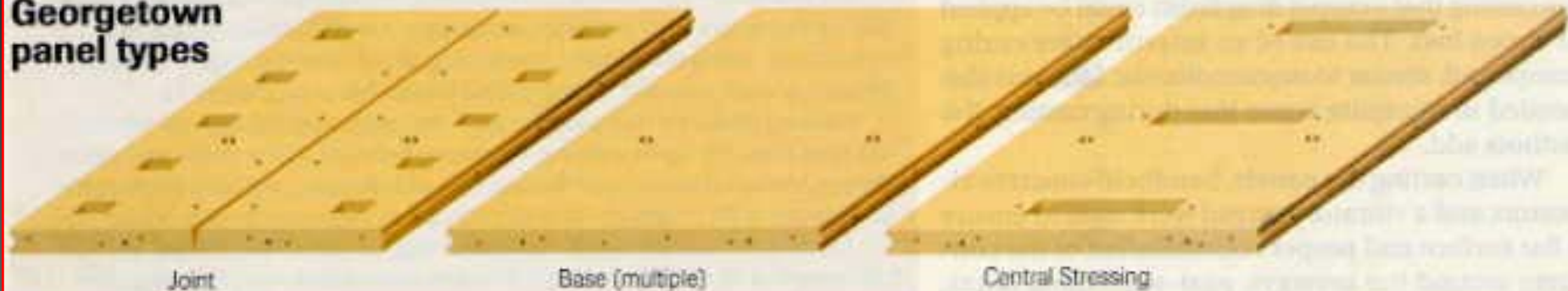


- **Four-Year Program**



- **Non-Proprietary**
- **Manufactured in PCI-Certified Plants**
- **“Precast Prestressed Concrete Pavements”  
(PPCP)**

**Georgetown  
panel types**



Joint

Base (multiple)

Central Stressing

- **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**



**– 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**



**PCI-FHWA Cooperative Agreement**

**Cooperative Effort to Engage Industry and Agencies**

