Accelerating Context Sensitive Solutions
A Case Study of I-465 in Indianapolis
Accelerating Context Sensitive Solutions
A Case Study of I-465 in Indianapolis
PART 1: Accelerating Reconstruction with CSS

PART 2: Innovations & Lessons Learned
PART 1:
Accelerating Reconstruction with Context Sensitive Solutions

1. Study Area
2. Project Management Strategies
3. Selected Design Solutions
Study Area

- 53-mile beltway
- 12-mile project
- 16 Interchanges
- Add travel lanes
- $500 million budget
- Design and PI began 2004
- CSS Design Guidelines March 2005
- Construction to end 2011
Study Area

Gateway to Key Destinations:

- City of Indianapolis
- International Airport
- Indianapolis Motor Speedway and Raceway Park
- Regional parks
- Regional shopping centers
- Residential neighborhoods
Study Area

Connections Along and Through
Study Area

Clear Graphic Communication
Project Management Strategies

- Concepts First
- Interdisciplinary Teams
- Public Involvement
- Governmental Coordination
Concepts First

Project Management Strategies
Project Management Strategies

Geographic and Historic Contexts
Concepts First: Three Big Organizing Ideas
Project Management Strategies

What's the Big Idea? **Natural Heritage**
What's the Big Idea? Cultural Heritage
Project Management Strategies

What’s the Big Idea? Technological Heritage
Project Management Strategies

Organizing Idea

Application to Forms, Materials, and Landscape

Design Solutions
Review and Synthesize the three big organizing ideas into one Design Solution: Crossroads Heritage
Design Synthesis: Structural Forms

INSPIRATION

APPLICATION

PIERS

LANDSCAPE

RAILINGS

LIGHTING

TUBE RAILINGS

NOISE BARRIER
Design Synthesis: Materials

**Innovation**
- Raw Materials
- Crafted Stone
- Shape/Form

**Application**
- Bridge Abutment
- Noise Wall on Retaining Walls
- Retaining Walls
- Rail Posts
- Pilaster
- Noise Walls
- Noise Wall Posts
- Pilasters and Rail Posts
- Bridge Parapet
Interdisciplinary Teams

- Expert Experience
- Varied Perspective
- Rigorous focus on issues:
  - Budgetary
  - Technical
  - Aesthetics
  - Environmental
  - Social
Public Involvement

- PI Specialist
- Establishing Citizen Advisory Group (CAG)
- Varied Venues
Governmental Coordination

- City of Indianapolis Mayor’s Office & DPW
- Wayne Township / MCANA
- US 40 West Revitalization
- Indianapolis Motor Speedway
- Farley Neighborhood Association
- Indianapolis Cultural Development Commission
- Indy Parks
- Indianapolis Airport Authority
- Wayne Township Schools
- FHWA
- Eagle Creek Woods Homeowners Association
- Indiana State Police
- Decatur Township Civic Council
- Arts Council of Indianapolis
- IndyGo Transit
- and others . . .
Creative Design Solutions

Holistic Problem Solving

- Technical Issues
- Community Issues
- Environmental Issues
- Comprehensive Design Solutions
Creative Design Solutions

Technical Issues: Understanding Implications

• Maintenance of Traffic
• Construction Sequencing
• Noise Mitigation
• ROW
• Roadway
• Structural
Community Issues: Understanding Values

- Isolated Communities:
  - Access to Neighborhood
  - Access to Business
- Pedestrian Connections
- Pedestrian Mobility
- Visual Quality / Aesthetics
Creative Design Solutions

Environmental Issues: Understanding Impacts

- Noise
- Light Pollution
- Stormwater
Comprehensive Design Solutions

- Bridges
- Soundwalls / Retaining Walls
- Landscaping
- Amenities: signage, lighting, fencing
Creative Design Solutions

Design Solutions: Neighborhood Bridges
Creative Design Solutions

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**Design Solutions:** Neighborhood Bridges
Design Solutions: Community Bridges
Creative Design Solutions

Design Solutions: Community Bridges – Pedestrian Promenade
Creative Design Solutions

**Design Solutions:** Community Bridges – Pedestrian Promenade
Creative Design Solutions

Design Solutions: Community Bridges – Pedestrian Promenade

[Diagram of Accelerate I-465 Design Guidelines and Crossroads Heritage]
Creative Design Solutions

Design Solutions: Community Bridges
Creative Design Solutions

Design Solutions: National Interchange
Creative Design Solutions

**Design Solutions:** Retaining Walls
Creative Design Solutions

Design Solutions: Soundwalls
Creative Design Solutions

Design Solutions: Landscaping
Creative Design Solutions

**Design Solutions:** Stormwater Management

- Design to reduce flooding
- Design to improve water quality
- Design to enhance environmental quality
Creative Design Solutions

Design Solutions: Amenities:
Signage, lighting & fencing
PART 2:
Innovations and Lessons Learned

1. Interdisciplinary Teams
   • Creative Design
   • Public Involvement Strategies
   • Agency Engagement
   • Strategic Planning
Innovations & Lessons Learned

1. Interdisciplinary Teams Essential

- Structural Engineers
- Geometric Engineers
- Transportation Landscape Architects
Innovations & Lessons Learned

2. Creative Design Solutions

• U-Beam Bridges
• Pedestrian Promenade
Creative Design Solutions: U-Beam
Creative Design Solutions: Pedestrian Promenade
Innovations & Lessons Learned

3. Public Involvement Process

• Establish Community Advisory Group
• Let community define membership
• Design team must participate & lead meetings
Public Involvement Process: Community Advisory Group
Public Involvement Process: Neighborhood Meetings
Public Involvement Process: Information Fair
Innovations & Lessons Learned

4. Agency Engagement:

- Invite all affected agencies
- Coordinate feedback from agencies
- Understand timelines from various groups
Innovations & Lessons Learned

5. Strategic Planning:

• Promote long-term vision
• Promote tie-in to economic development opportunities
• Make it their project
Questions & Answers