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The CSS Challenge:
Moving Beyond Training

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The CSS Challenge

- CSS in North Carolina
- Barriers to CSS implementation
- Implementation strategy

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CSS in North Carolina

- CTE under contract with NCDOT
- 3-day CSS course
- Began Spring 2003
- Trained 1000+ people to date
- NCDOT, consultants, agencies, local government staff
- Planning, project development, construction, maintenance, operations

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CSS Guiding Principles

Solutions will:

- Address the transportation need
- Be an asset to the community
- Be compatible with the natural and human environment

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Context Sensitive Solutions

Source: Utah Dept. of Transportation

Course Overview

- Defining Quality of Life and Context
- CSS Transportation Decision-Making
- CSS Skills
  - Communication & Collaboration
  - Stakeholder Involvement
  - Case Study
- CSS in Design
- CSS in Construction, Maintenance and Operations

Participant Identified Barriers to Implementation

- Process
- Money/Time
- Trust
- Partnerships/Stakeholders
- Policy/Standards/Regulations
- Politics
- Leadership Support
- Skills/Training

Participant Identified Barriers to Implementation

- **Process**
  - "the process is inflexible"
  - "pre-determined scope"
  - "lack of input/input too late"
  - "lack of internal communication"
  - "constructability/maintenance"
- **Money/Time**
  - "budget constraints"
  - "limited resources-money and staff"
  - "can't do CSS and meet schedules"
  - "if we tie the other hand behind our back how will we give timely program delivery?"

Participant Identified Barriers to Implementation

- **Trust**
  - "adversarial relationships"
  - "trust-need to overcome DOT past"
  - "public credibility"
  - "arrogance on our part"
- **Partnership/Stakeholders**
  - "conflicting goals"
  - "lack of proper input from stakeholders"
  - "contracting industry buy-in-entrenched mindset"
  - Buy-in from agencies for positive participation"

Participant Identified Barriers to Implementation

- **Policy/Standards/Regulations**
  - "Structured design guidelines (policies)"
  - "CSS compromises design & safety"
  - "we've always done it that way standards (conflicting policies)"
- **Change Issues**
  - "changing old habits"
  - "we've always done it this way"
  - "comfort of the box (change)"
- **Politics**

Participant Identified Barriers to Implementation

- **Leadership support**
  - "lack of buy-in from management"
  - "ignorance—management inflexibility"
  - "upper management involvement"
  - "lack of vision"
- **Skills/Training**
  - "inexperience—fear of doing/saying the wrong thing"
  - "lack of proper cross training across disciplines"
  - "communicating idea effectively"
  - "lack of understanding among designers/engineers of environmental impacts"

Participant Identified Barriers to Implementation

- Process
- Money/Time
- Trust
- Partnerships/Stakeholders
- Policy/Standards/Regulations
- Politics
- Leadership Support
- Skills/Training

Assessing Opportunities

- Organizational strengths
- People strengths
- Partnerships available
- Resources
- Greatest “pain”
- Quickest way to institutionalize

LOOK FOR BEST WINDOW OF OPPORTUNITY!!

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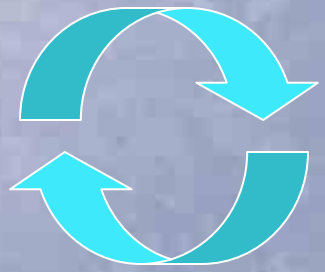
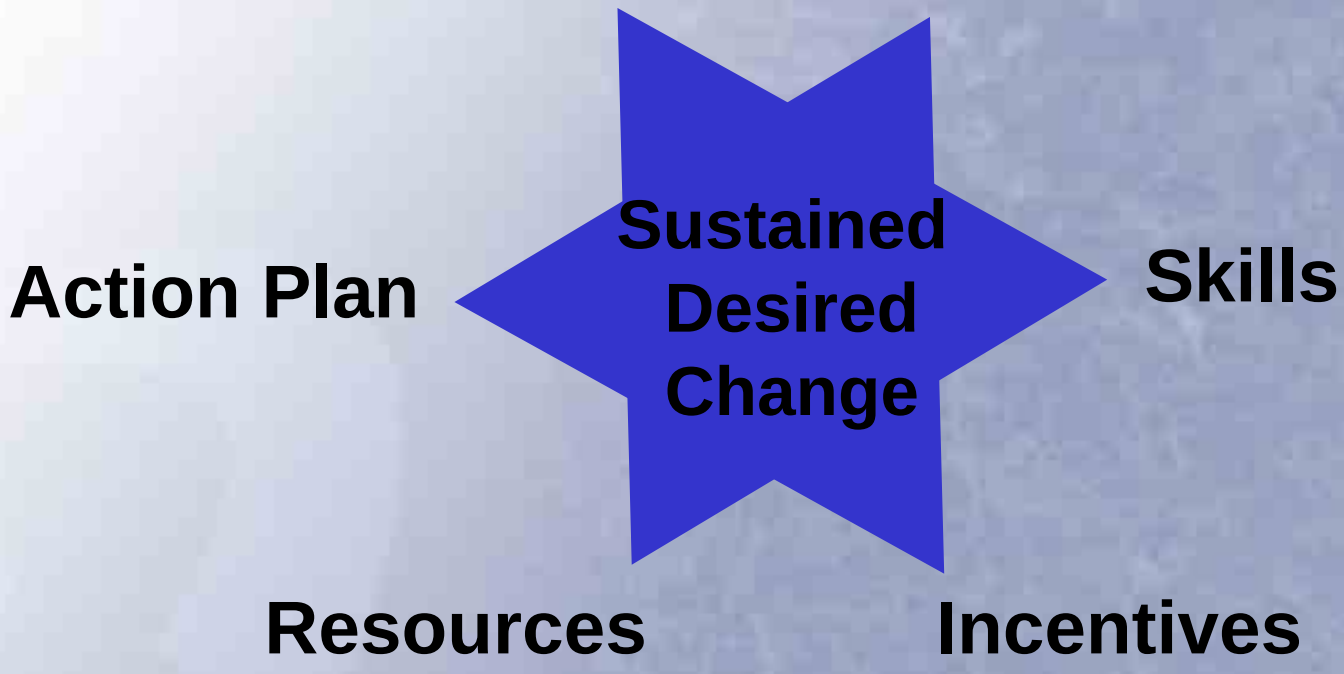
Managing Change

- Leadership
- Planning
- Information & Analysis
- Process & Policy Alignment
- Human Resources & Training
- Partnerships



- Results
- Customer Satisfaction

Managing Change



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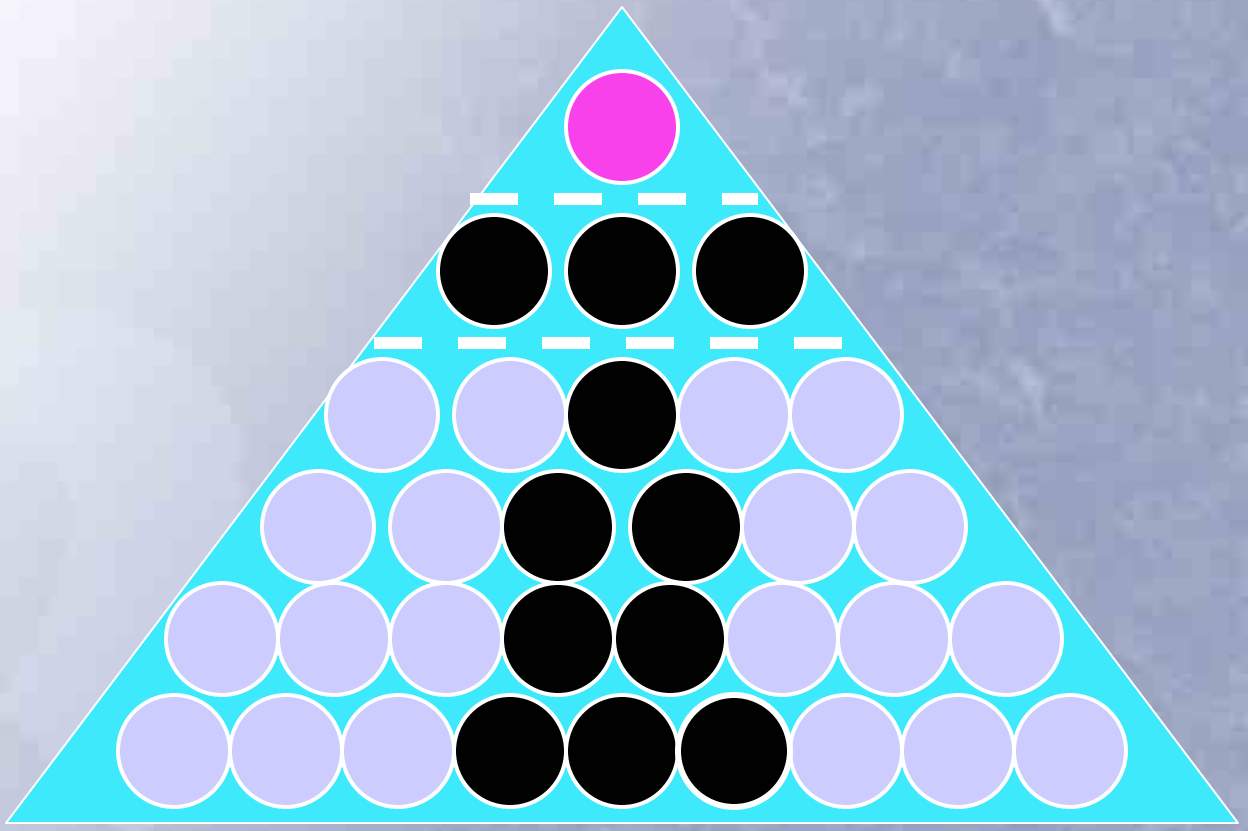
Managing Change



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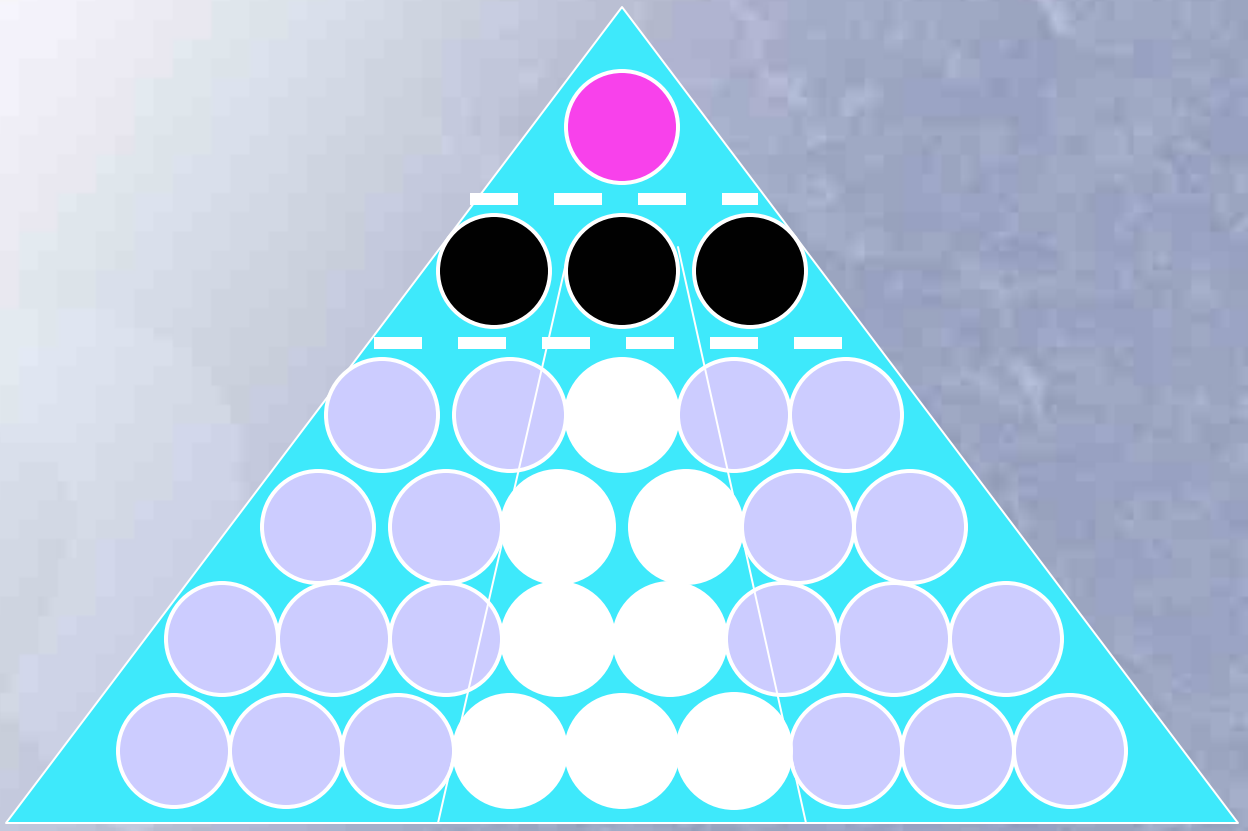
Managing Change



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Summary

- Training is not enough!
- CSS implementation requires
  - Internal buy-in at all levels of DOT
  - Broad based organizational support
- Change management strategy

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Additional information:

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Context Sensitive Solutions Policy

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Perception

Executive Directive

- MDOT shall:
  - Develop policies and procedures to expand the use of Context Sensitive Solutions (CSS) for transportation projects
  - Invite stakeholder participation
  - Address safety, mobility, liability, the environment, and other issues

Stakeholders want Input

How has MDOT Involved External Stakeholders?

- Stakeholders come from the:
  - environmental community
  - planning associations
  - local governments
  - transportation industry
  - other state agencies

How has MDOT Involved External Stakeholders?

- Buddy System
- April 2004 Survey
- Stakeholder Workshop, June 2004

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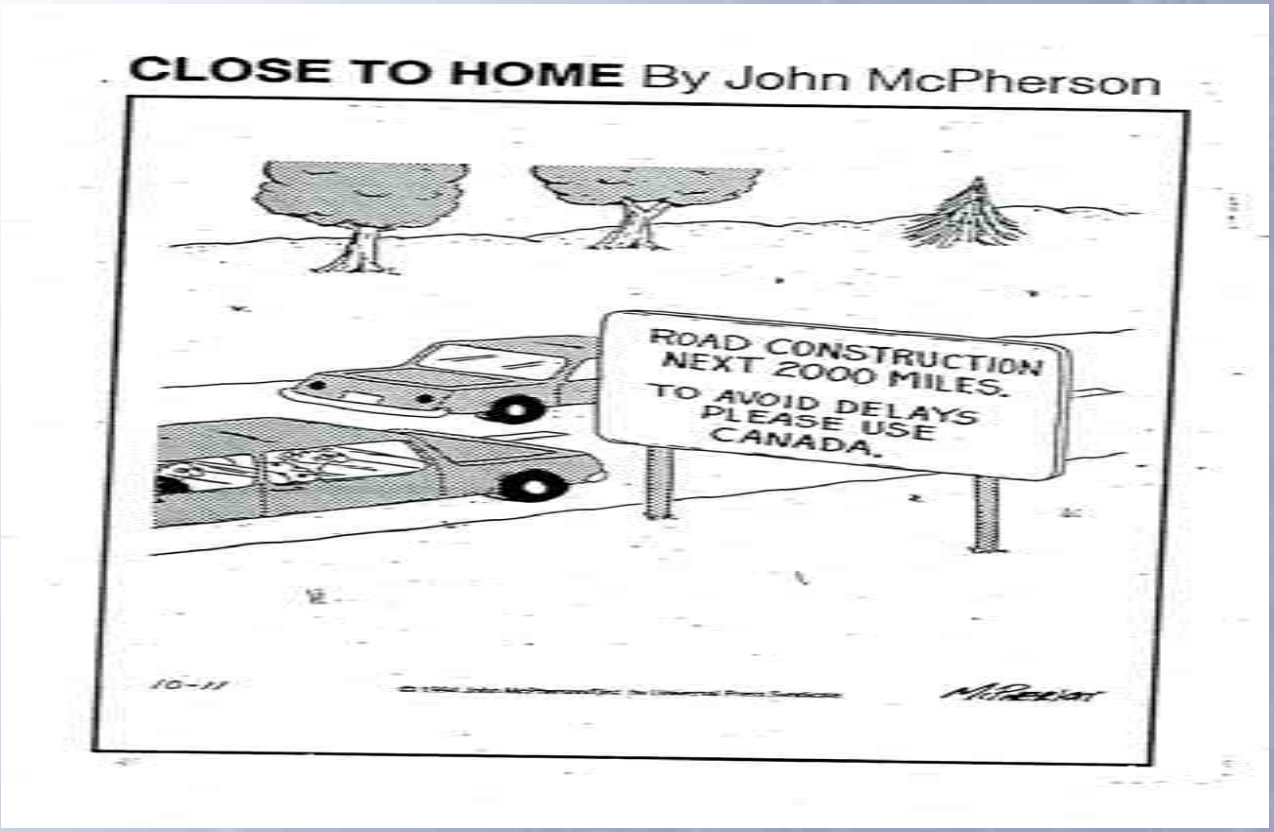
Traveling Public



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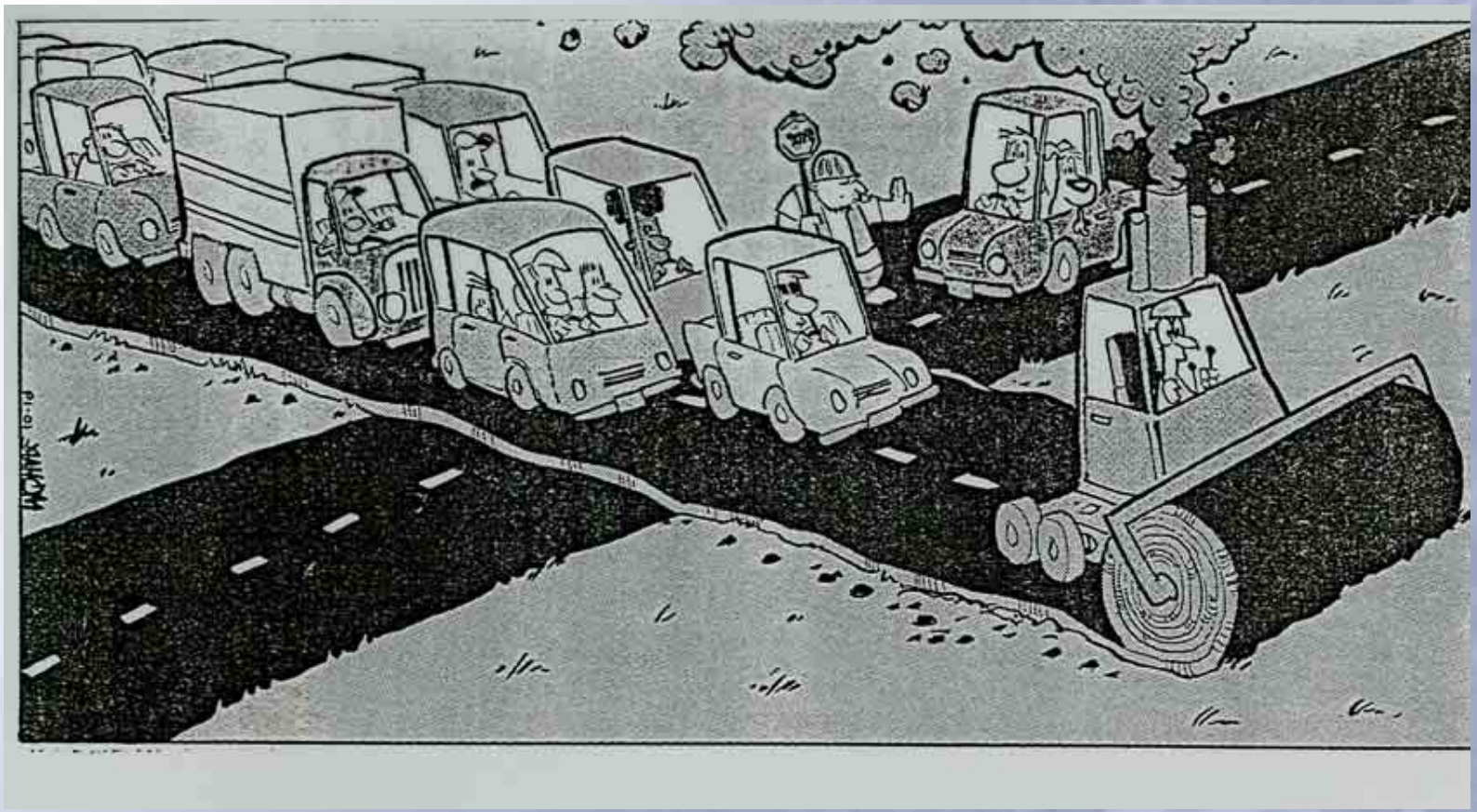
Neighbors



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Six focus groups were formed at the June workshop:

- Public Involvement
- Aesthetics
- Environmental Quality
- Mobility
- Historic/Cultural/Community Concerns
- Economic Development

What did the Focus Groups Do?

- Met 3-4 times
- Completed worksheets

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Communication is Key

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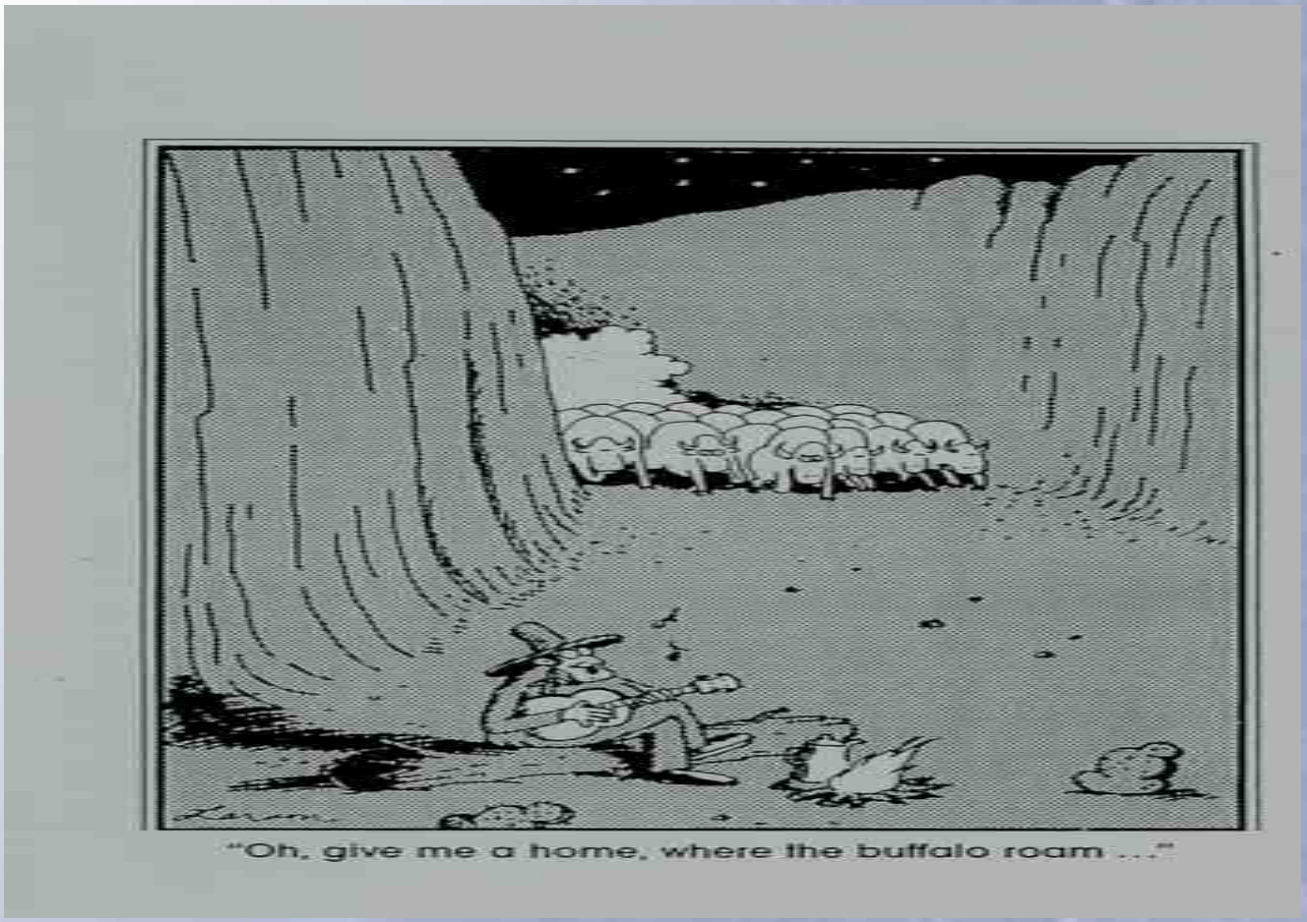
Common Understanding



How has MDOT Responded to Stakeholder Input?

- Follow-up workshop December 2004
- Revised the draft policy based on stakeholder input

How has MDOT Responded to Stakeholder Input?

- Created a draft high-level implementation plan
- Conducted a Transition Meeting with Region/TSC staff

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Integrated Transportation

What did MDOT do to Involve Leadership?

- All versions sent to MDOT leadership for review and comment
- Sponsorship at the Bureau Level
- Almost every top department Administrator attended the CSS workshops

What did MDOT Hear from the Stakeholders?

- Agree public involvement should be early and often
- Want MDOT to encourage CSS use by local governments
- Want continued input into policies and implementation

What's Next?

- CSS manual and train staff
- Detailed implementation plan following policy approval
- Hold annual Stakeholder/MDOT Partnering Meeting

Policy Approved

- The State Transportation Commission approved MDOT's policy on Context Sensitive Solutions on May 26, 2005

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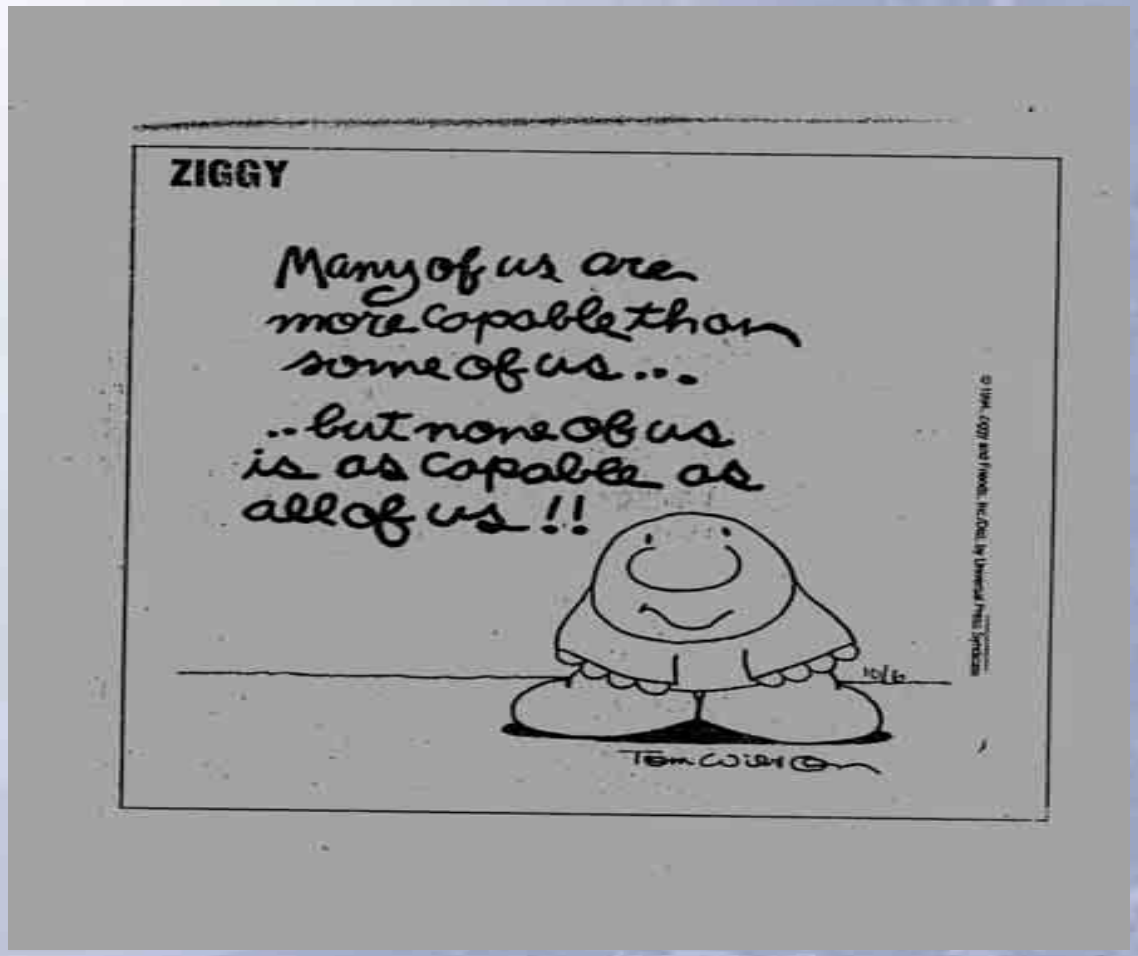
CSS is Working Together



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Presentation Agenda

- PART 1: Project Introduction
- PART 2: Accelerating Design Development with CSD
- PART 3: Innovative CSD Solutions: Bridges

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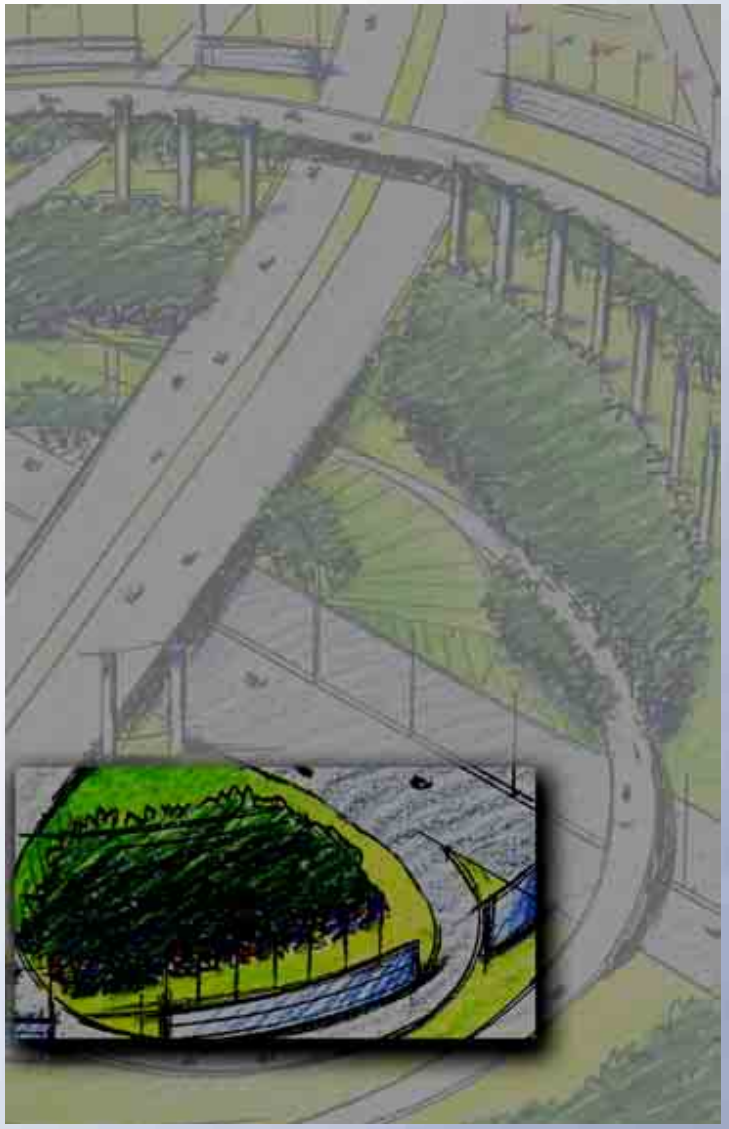

PART 1:
Project Introduction

- Project Study Area
- Project Context
- Project Summary

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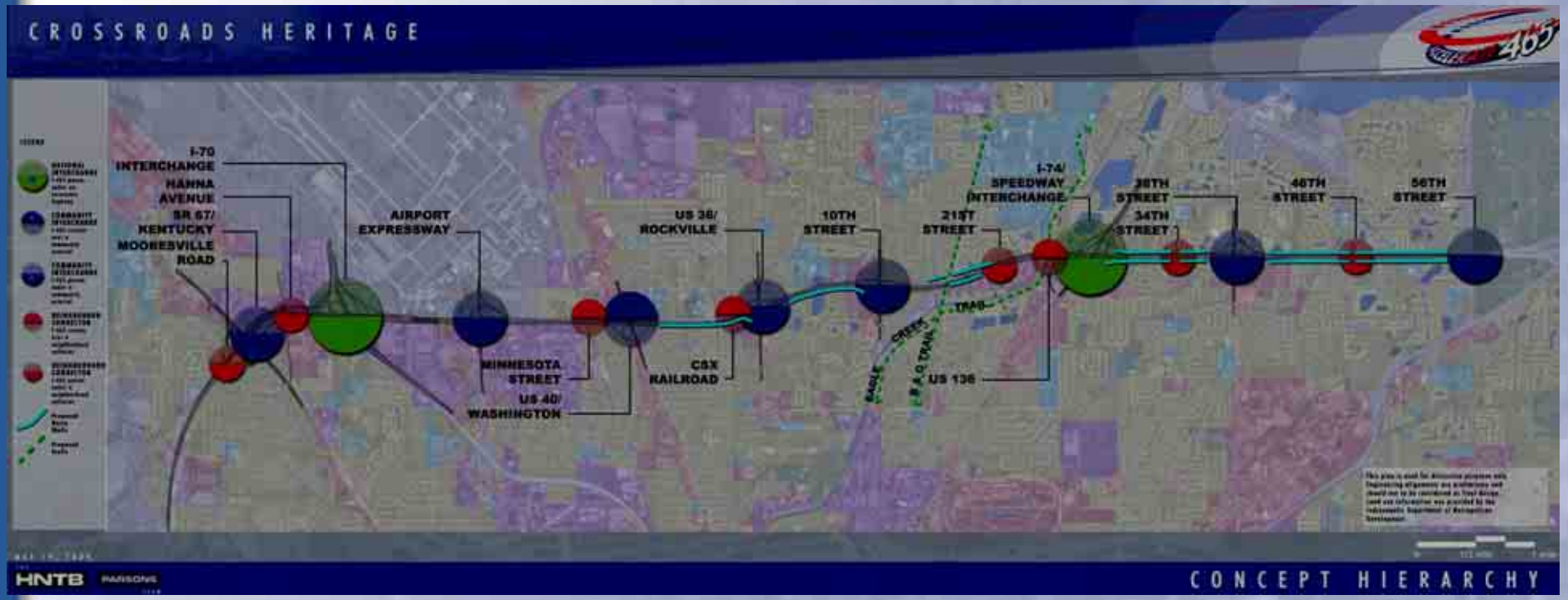
Project Introduction

Project Study Area



Project Introduction

Project Context

Gateway to City of Indianapolis with connections to:

- Indianapolis International Airport
- Indianapolis Motor Speedway
- Indianapolis Raceway Park
- Eagle Creek Regional Park
- Regional shopping destinations
- Residential neighborhoods

Project Introduction

Project Summary

- 12 miles of the 53-mile Indianapolis beltway
- Mainline, bridge, and interchange reconstruction
- Additional lane in each direction
- Estimated $500 million construction cost
- Design 2004-2006
- Construction 2007-2011

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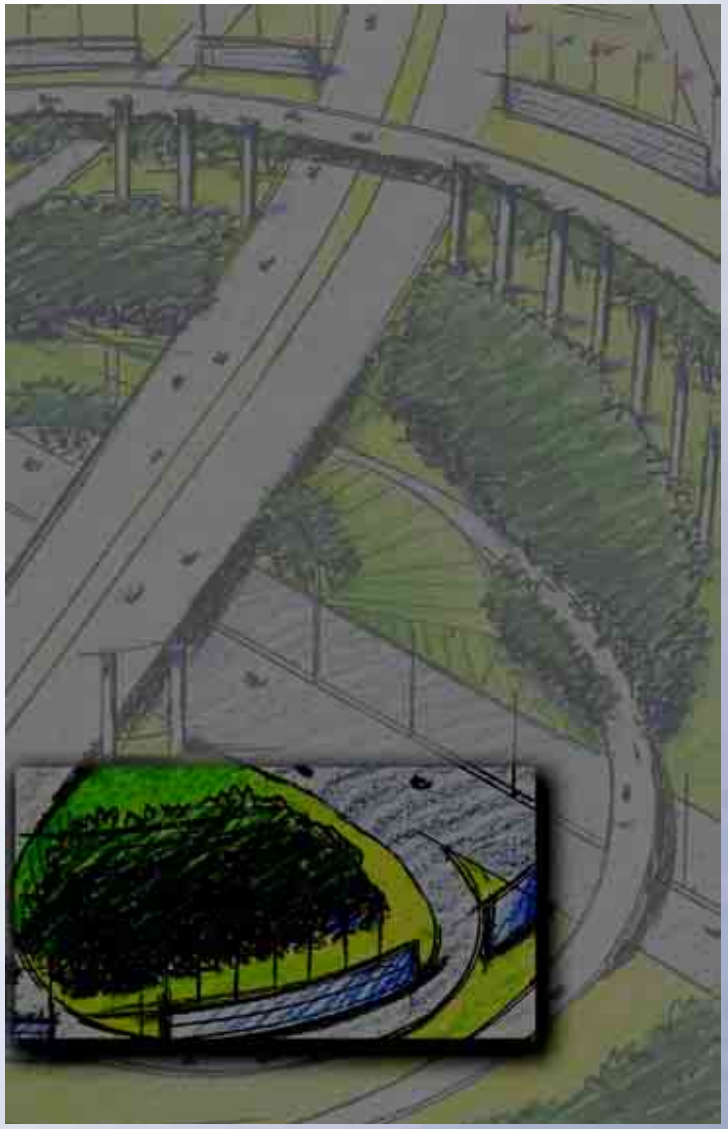


PART 2:

Accelerating Design Development with CSD

- Integrated Public Involvement
- Early Design Coordination
- Accommodating Multiple Modes

Accelerating Design

CSD Accelerator 1 –
Integrated Public Involvement

- Public Involvement Specialists
- Inclusive Public Representation
- Varied Meeting Venues

Accelerating Design

CSD Accelerator 1 –

Integrated Public Involvement

Inclusive Community Representation

- Local Government
- Civic Organizations
- Business Organizations
- Neighborhood Associations
- Regulatory Agencies

Accelerating Design

CSD Accelerator 1 –

Integrated Public Involvement

Varied Meeting Venues

- Citizens Advisory Group (CAG)
- Inter-governmental Meetings
- Neighborhood Meetings
- Civic Organization Meetings
- Project Information Fair

Accelerating Design

CSD Accelerator 2 –
Early Design Coordination

- Technical Issues
- Community Issues
- Environmental Issues

Accelerating Design

CSD Accelerator 2 –
Early Design Coordination

Technical Issues:

- Maintenance of Traffic
- Construction Sequencing
- Noise Mitigation
- Right of Way
- Roadway Geometrics
- Structural Types

Accelerating Design

CSD Accelerator 2 –
Early Design Coordination

Community Issues:

- Mobility and Access
- Neighborhood Connectivity
- Community Aesthetics
- Pedestrian Safety
- Bicycle Routes
- School and Park Crossings

Accelerating Design

CSD Accelerator 2 –

Early Design Coordination

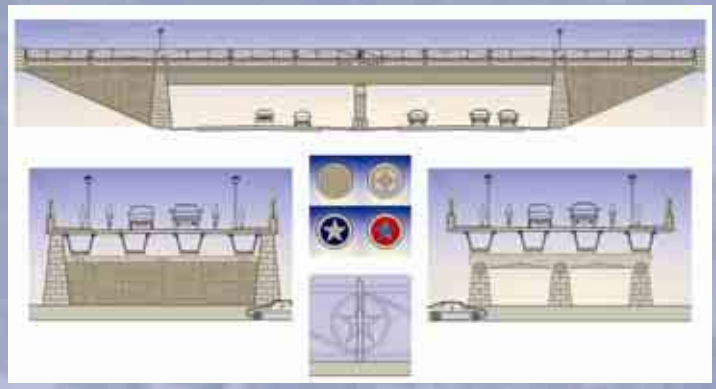
Environmental Issues:

- Noise Pollution
- Light Pollution
- Stormwater Management
- Air and Water Quality
- Historic Properties
- Environmental Justice

Accelerating Design

CSD Accelerator 3 –
Accommodating Multiple Modes

- Modal Safety
- Modal Access and Mobility
- Modal Integration



Accelerating Design

CSD Accelerator 3 –
Accommodating Multiple Modes

Modal Safety

- Distinct zones for each mode
- Adequate separation
- Design clues to guide behavior

Accelerating Design

CSD Accelerator 3 –
Accommodating Multiple Modes

Modal Access and Mobility

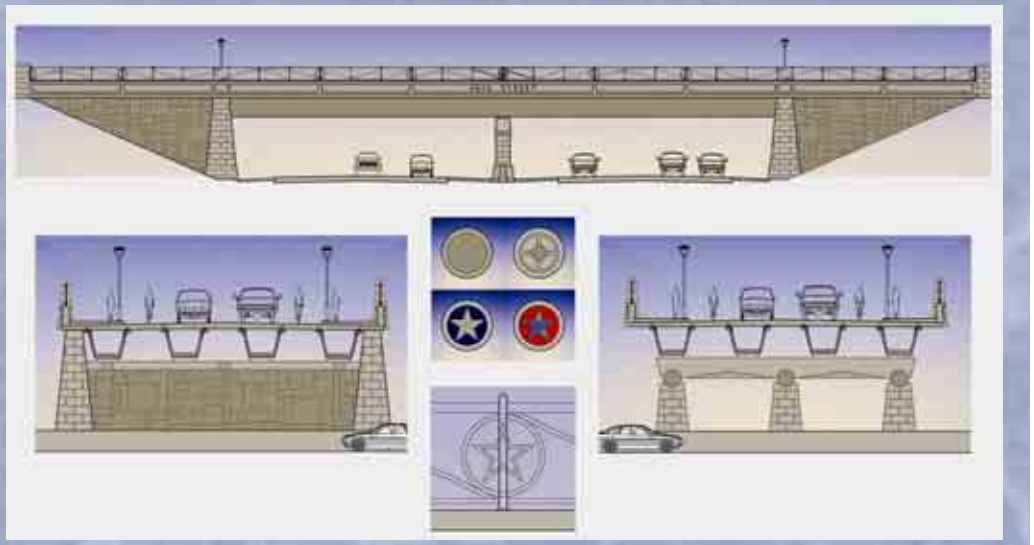
- Analyze each mode as a system
- Maintain existing links
- Establish new links

Accelerating Design

CSD Accelerator 3 –
Accommodating Multiple Modes

Modal Integration

- Define modal requirements
- Share facilities
- Provide redundancy



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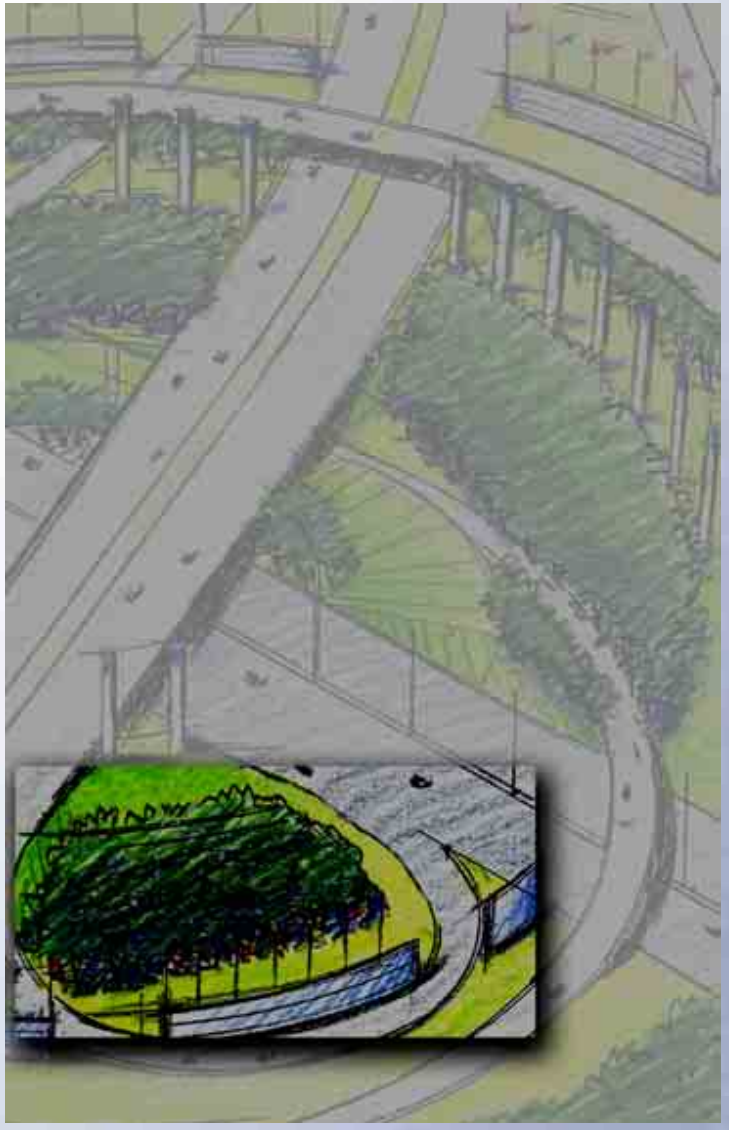

PART 3:
Innovative CSD Solutions: Bridges

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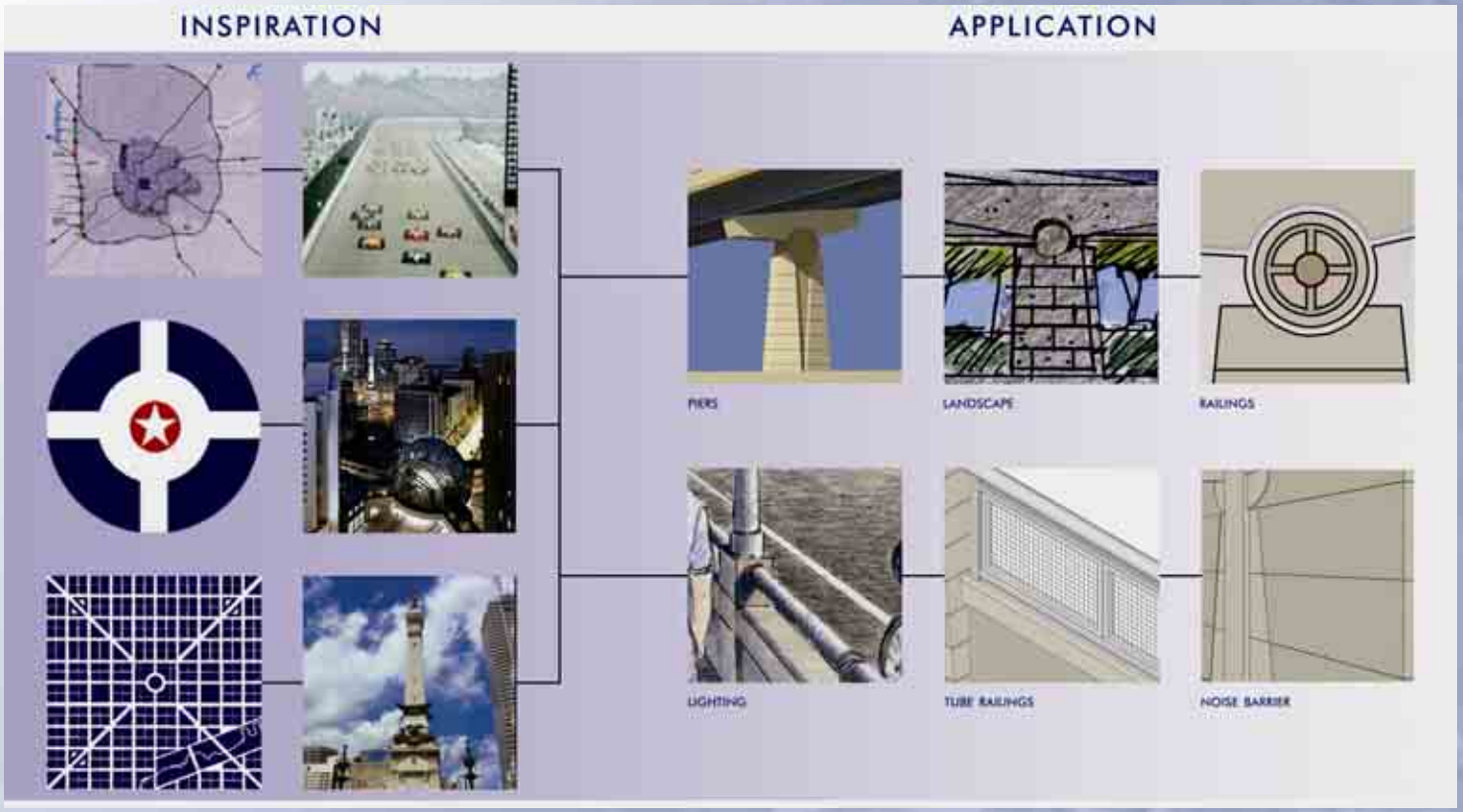
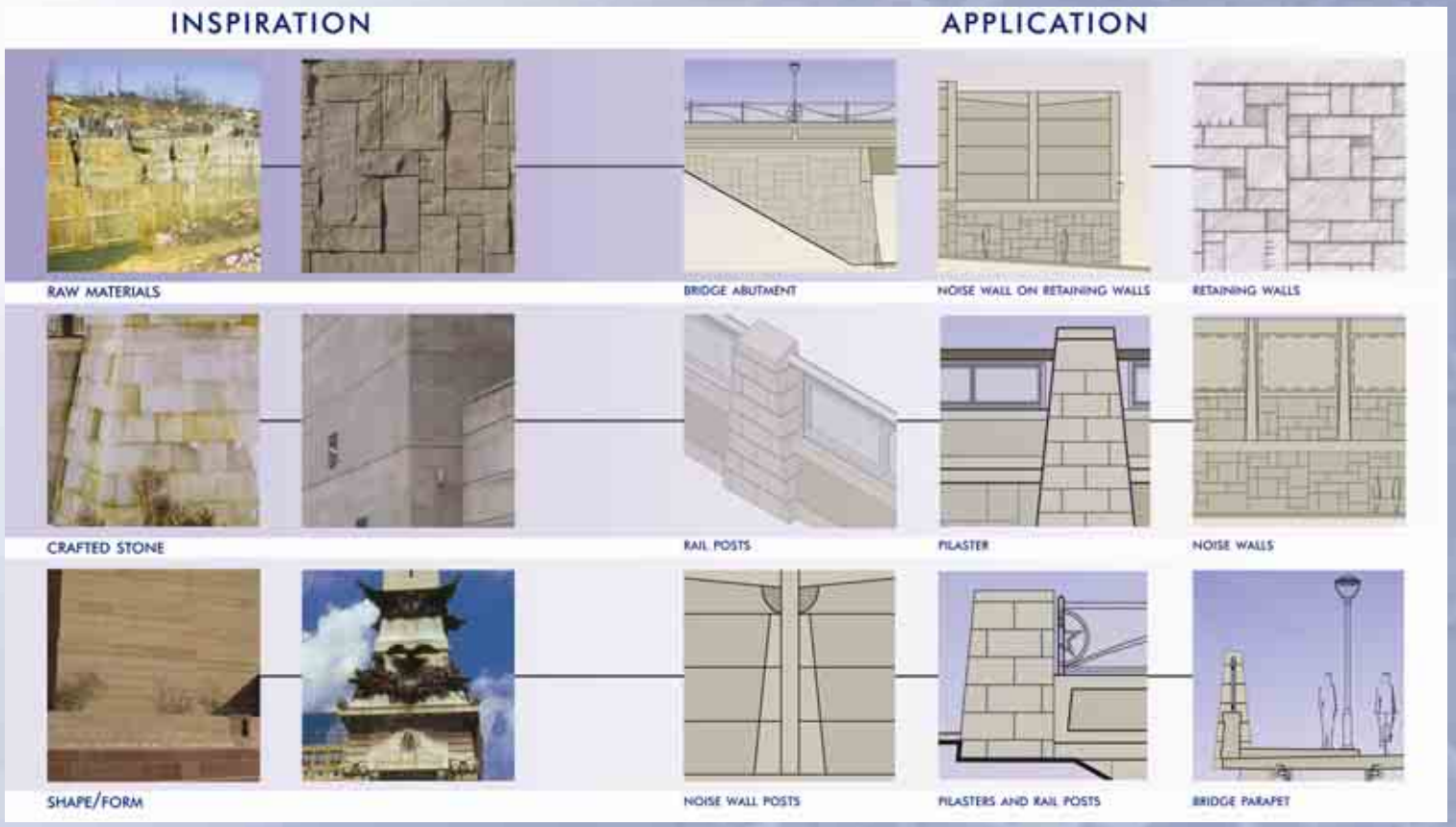
Innovative CSD Solutions

Bridges – Context Inspired Forms



Innovative CSD Solutions

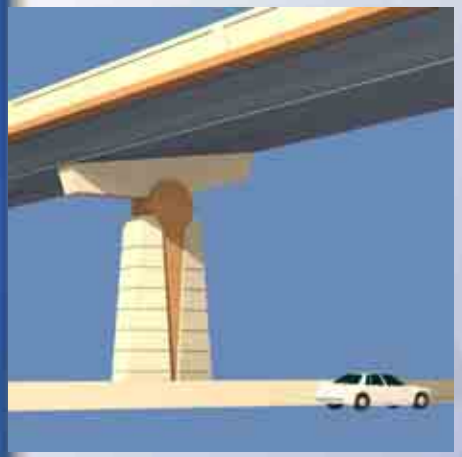
Bridges – Context Inspired Materials



Innovative CSD Solutions

Bridges

- National Interchanges
- Community Interchanges
- Neighborhood Crossings



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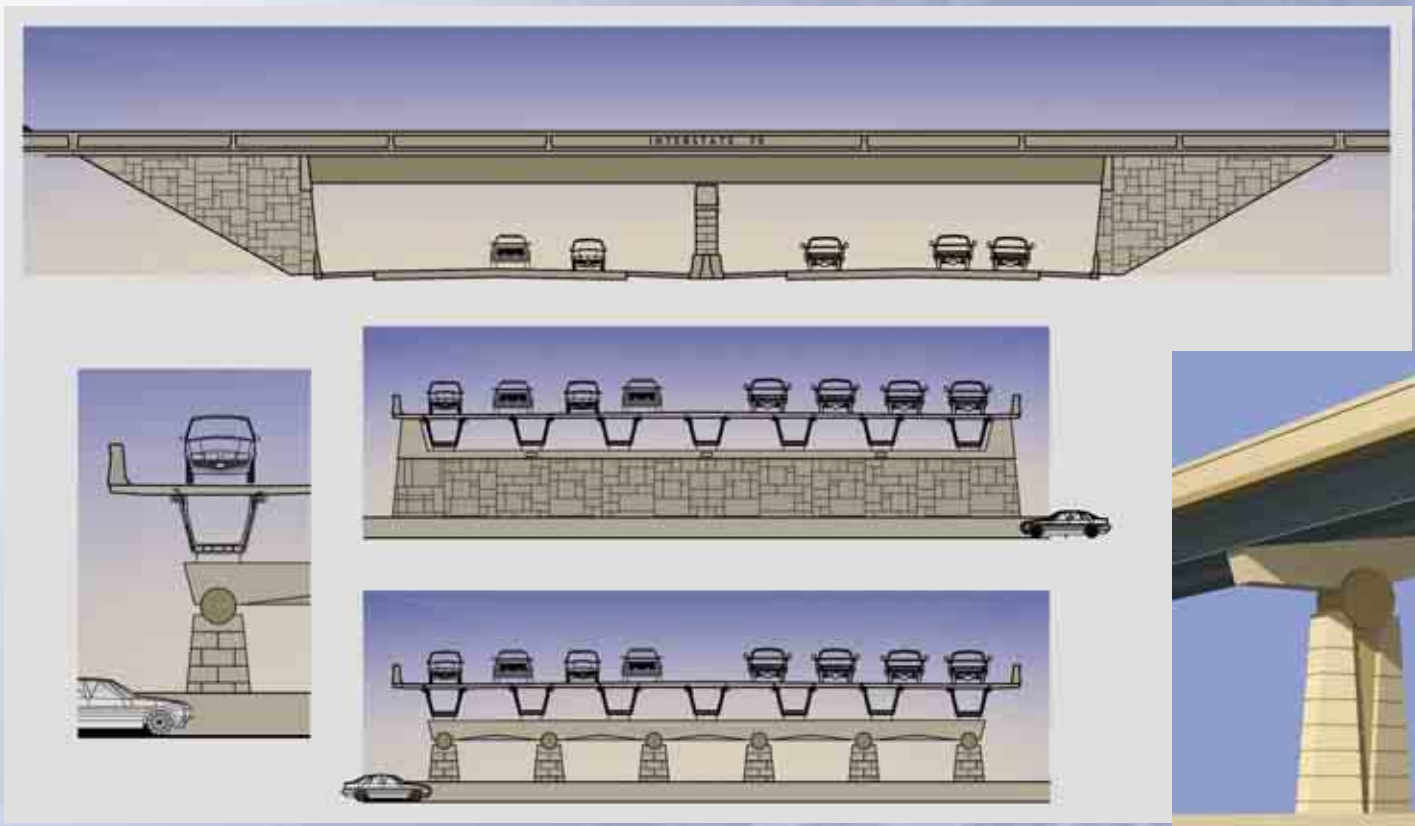
Innovative CSD Solutions

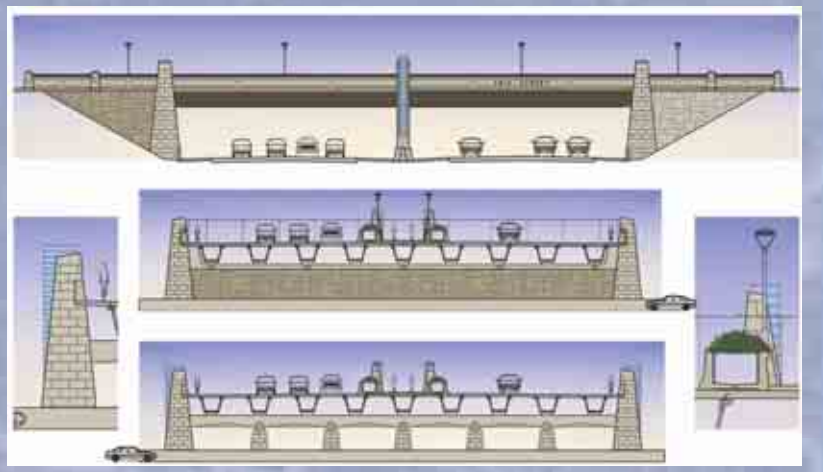
National Interchange Bridges



Innovative CSD Solutions

Community Interchange Bridge – U-Beam with Pedestrian Promenade

- Reduces pedestrian conflicts
- Reduces bridge width
- Reduces lighting requirements
- Provides space for ponds
- Creates unique identity



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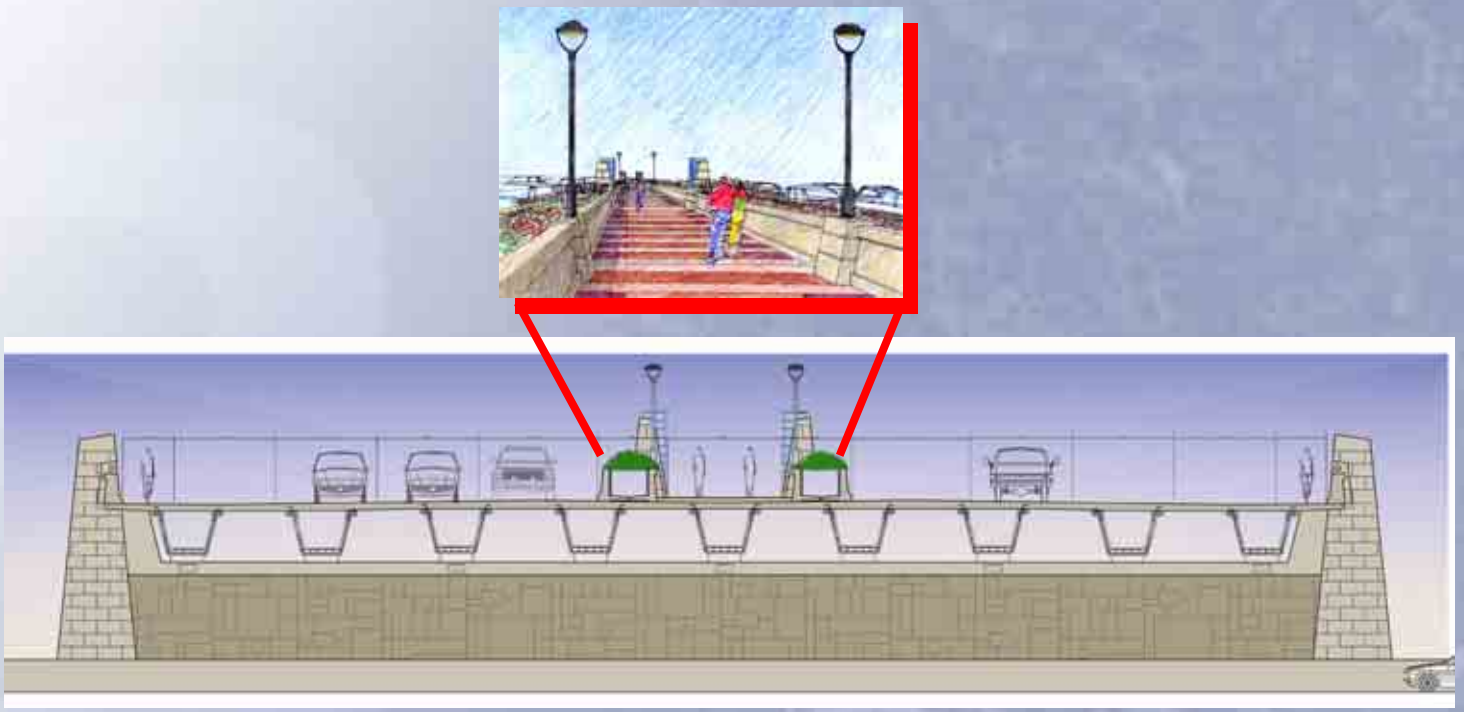
Innovative CSD Solutions

Community Interchange Bridge – U-Beam with Pedestrian Promenade

Innovative CSD Solutions

Community Interchange Bridge – U-Beam with Pedestrian Promenade



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Innovative CSD Solutions

Community Interchange Bridge – U-Beam with Pedestrian Promenade

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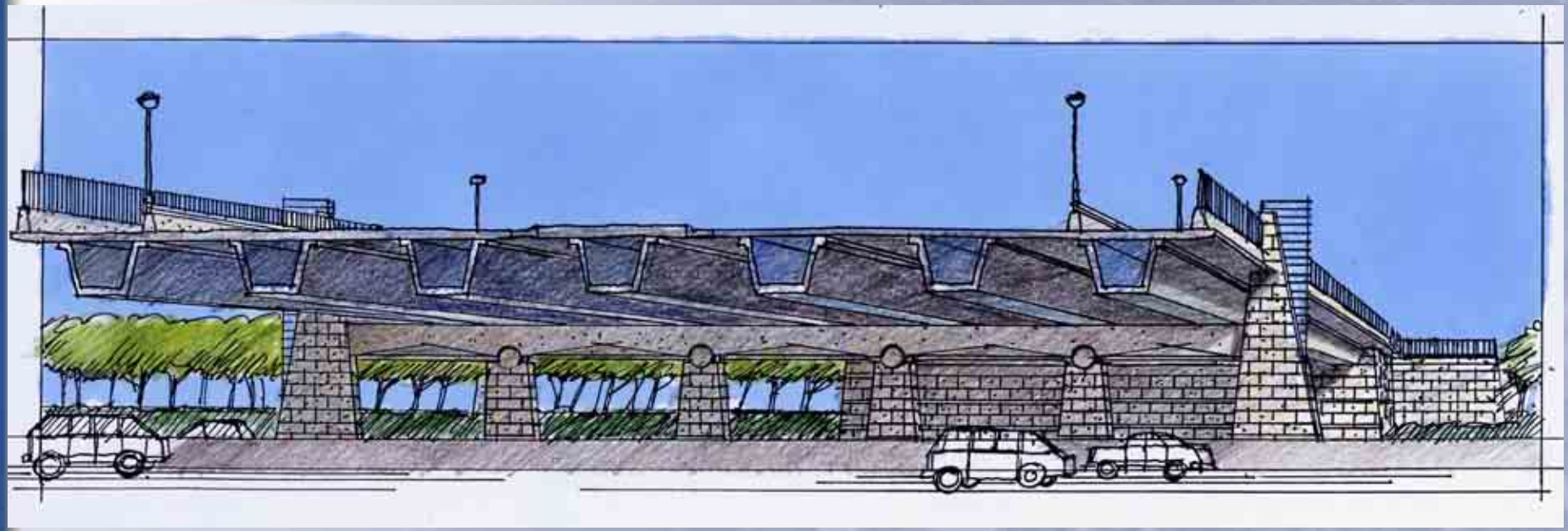
Innovative CSD Solutions

Neighborhood Crossing Bridge – U-Beam with Outboard Sidewalks



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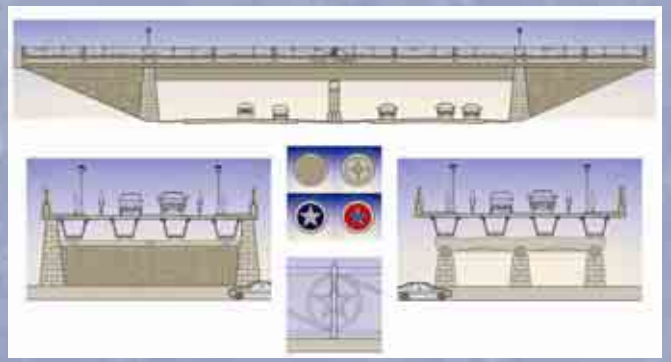
Accelerating Design

Neighborhood Crossing Bridge

- Wide sidewalks for pedestrians
- Bike lanes for bicyclists
- Lanes for local traffic
- Lighting for all modes
- Provides neighborhood connectivity
- Establishes community identity



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Questions?