Pennsylvania Planning Association
2005 Annual Conference

Allen D. Biehler, P.E.

PENNDOT

The way we were…

Where we have been…

Where we have gone

Transportation Factors

Quality of Life

Land Use

Economic Development

Fiscal Responsibility

Partners

The Pieces of the Puzzle

Meeting the Challenges
Making the Right Investments
Embracing A New Approach
(Smart Transportation and Right-Sizing)
Learning From Others

Meeting the Challenges

Making the Right Investment

Right-Sizing

Right-Sizing

•A “best fit” transportation program or project (all modes) that meets transportation needs and considers:

- community and regional goals
- quality of life
- economic development initiatives
- fiscal constraint
- social/environmental issues

Program Right-Sizing

"Efficient and Effective Use of Resources"

- ✓ System Preservation
- ✓ Statewide and Regional Transportation Priorities
- ✓ Fiscal Responsibility

Program Right-Sizing

- March 2004 - 26 projects identified
  - Fiscal Challenges
    - 14 projects deferred $2 Billion
    - 12 projects reevaluated $3 Billion
  - Reevaluations Underway
  - Savings Directed to System Preservation

Right-Sizing Through Planning

Planning Process (23 CFR 450)

- Ideally, projects would be sized correctly through the comprehensive planning process
- Later scope changes need to be consistent with Plan/TIP, or formally amended.

Interstate 79 Missing Ramps

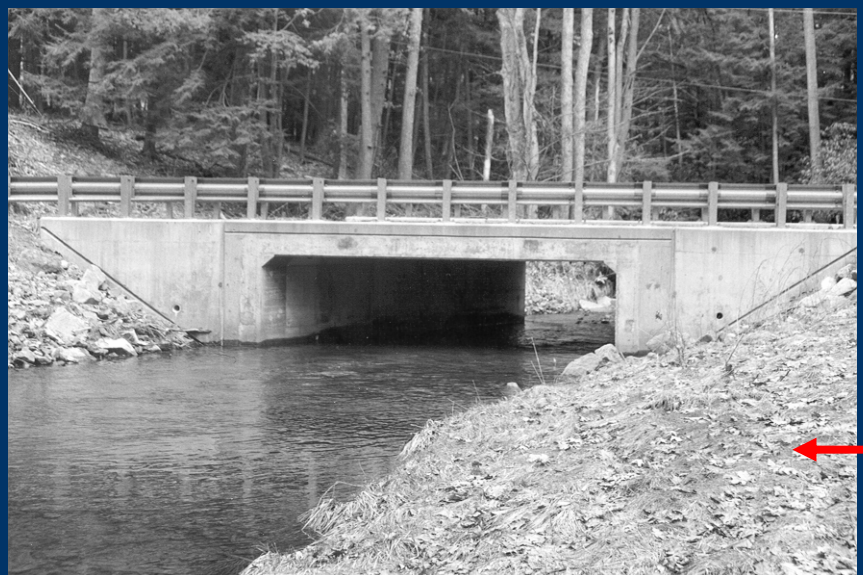
Total project savings:

$9.3 million

Books Covered Bridge

- Covered Bridge in Perry County
- Rehabilitated covered bridge versus replacement
- Cost savings $1,092,000

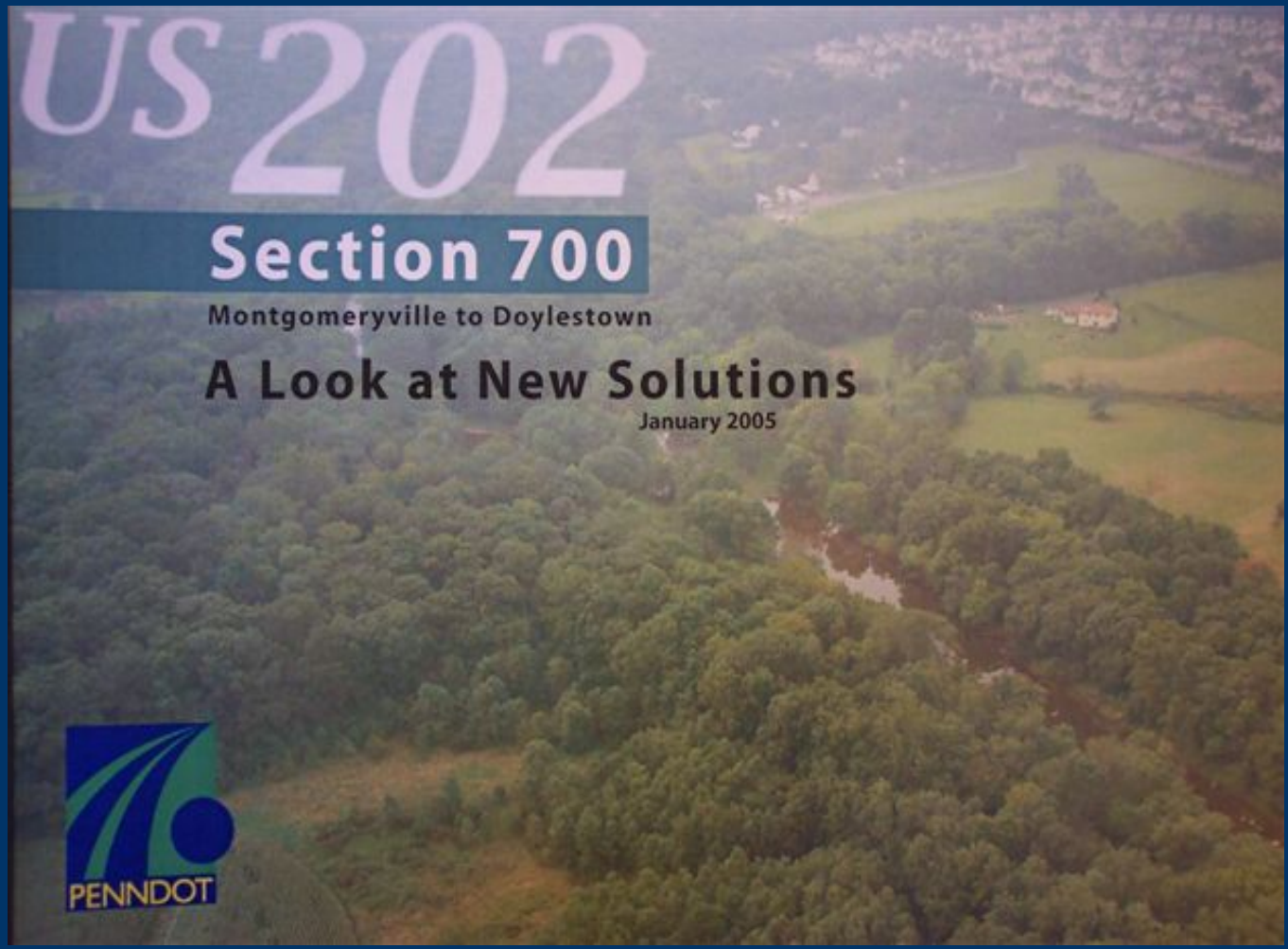
Rehab existing structure



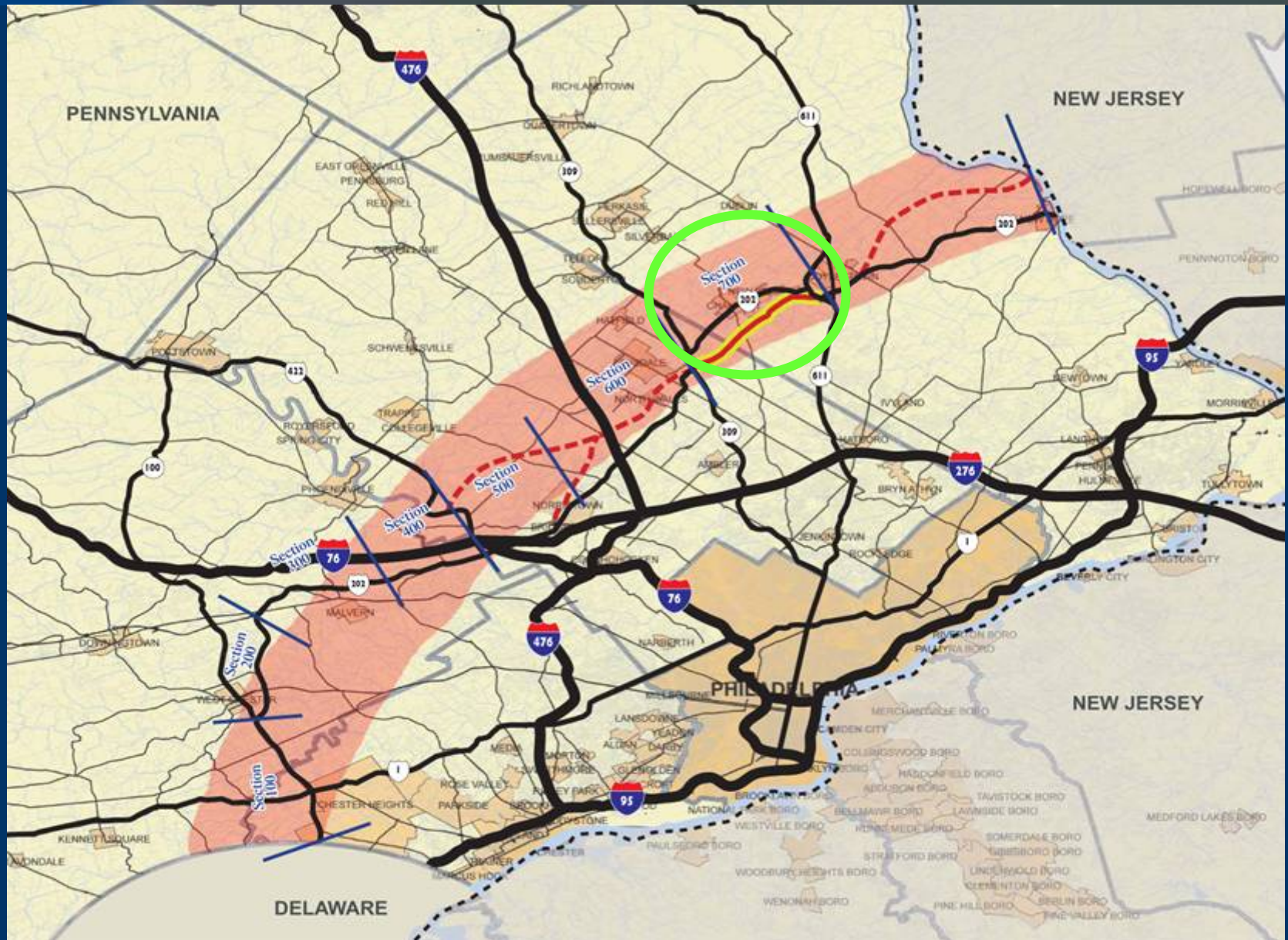
versus replacement

Mortonville Bridge

A New Approach



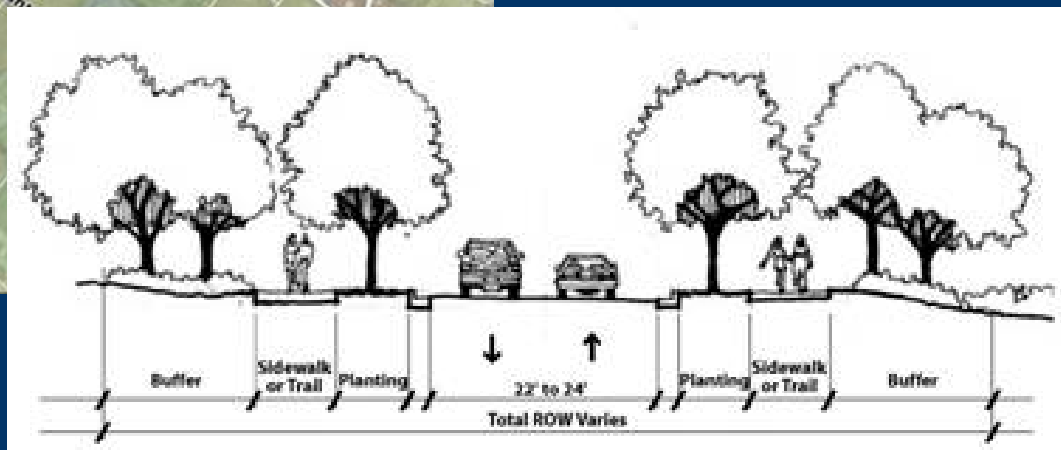
US 202 Section 700 – Montgomeryville to Doylestown



Four-lane Freeway

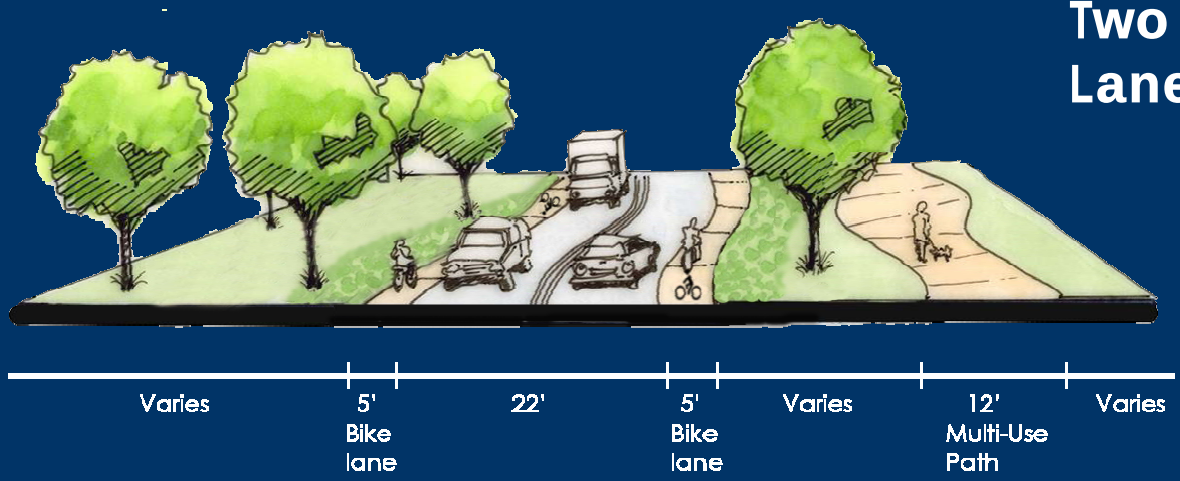
Parkway

Savings: $180M

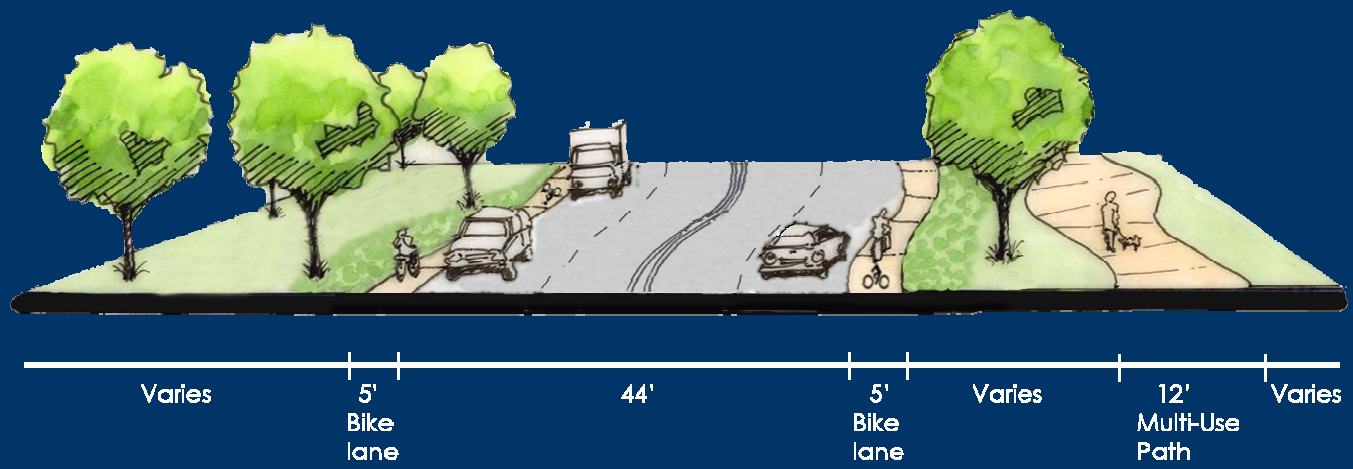


US 202 Cross Sections

Two Lanes



Four Lanes



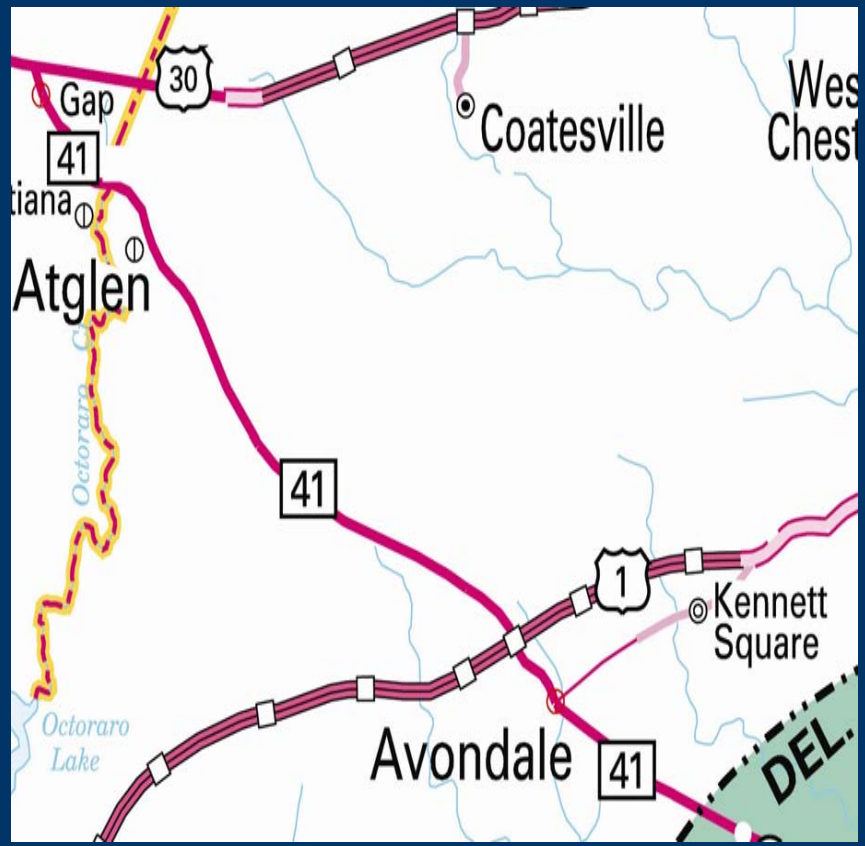
Routes 23 and 41

Route 23 – Lancaster County

Route 41 – Chester County

Rte 41 - Avondale

Rte 41 and State Street - Avondale



Right-Sizing

Practical Design

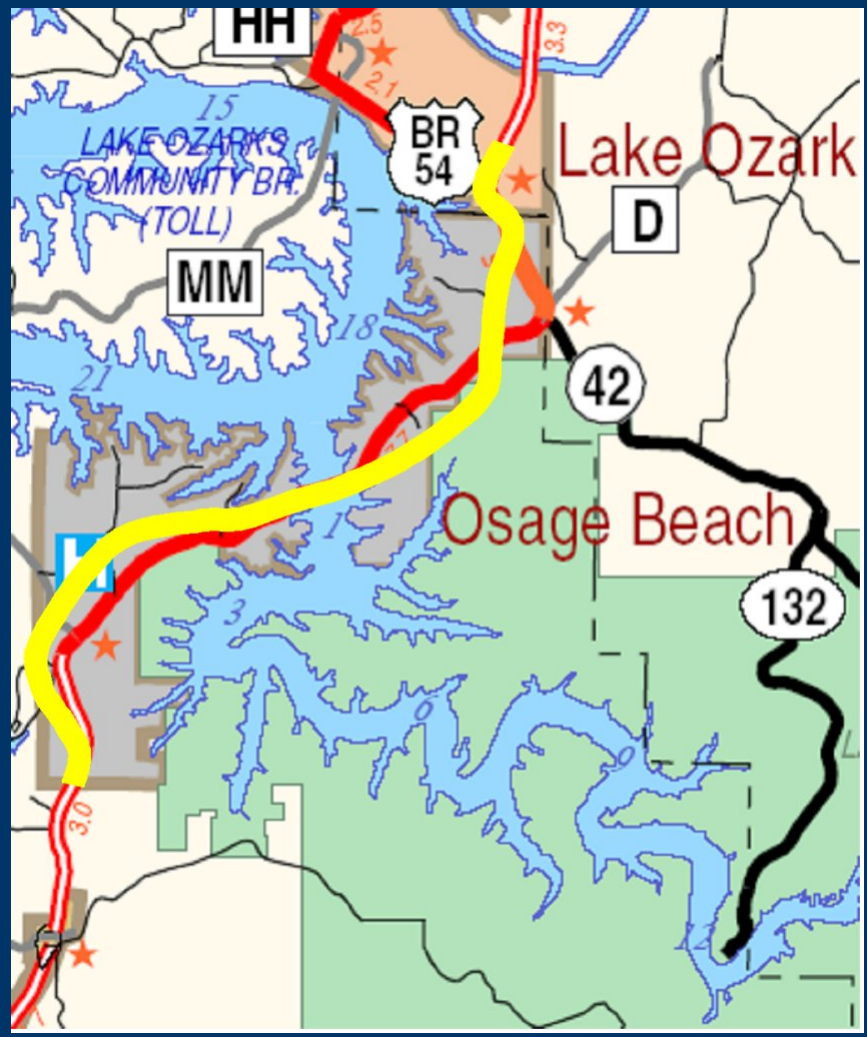
Meeting Our Customers' Needs

1) Best value for every dollar spent.
2) Innovative transportation solutions.
3) Safe transportation system.
4) Fast projects that are of great value.

Practical Design

Meeting Our Customers' Needs

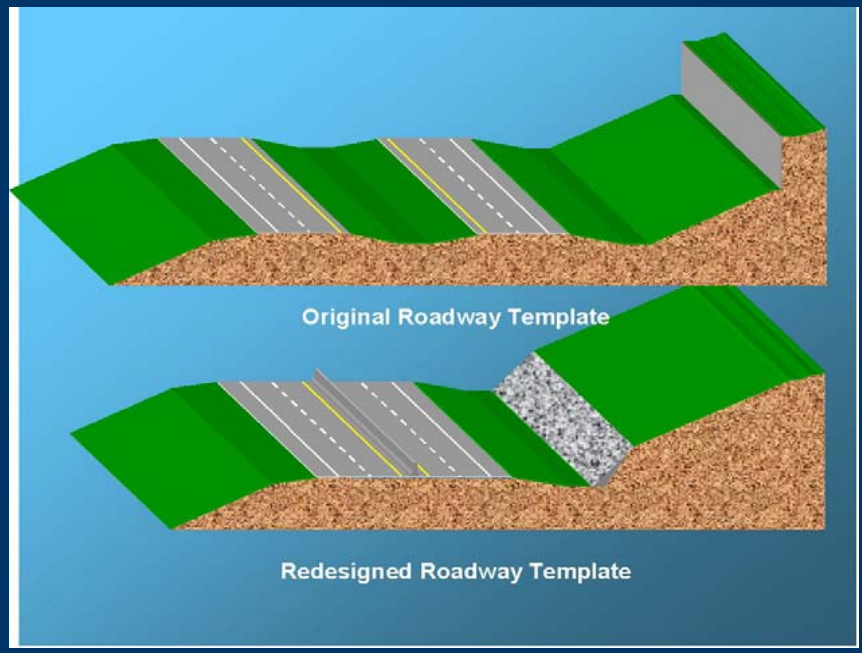
- Route 54 in Camden County will be realigned around Osage Beach.
- Original scope: four lanes, divided highway, retaining walls.



Practical Design

Meeting Our Customers' Needs

- Revised scope: narrower median widths, concrete barriers
- Minimized grading and right of way costs.



- Original estimate: $136.5 million
- Redesign: $ 99.0 million
- Savings: $ 37.5 million

Practical Design

Meeting Our Customers' Needs

Route I-64, St. Louis
Redevelopment project

Original Estimate
$8.2 million

Redesign $6.1 million

Savings $2.1 million

Linking Land Use & Transportation

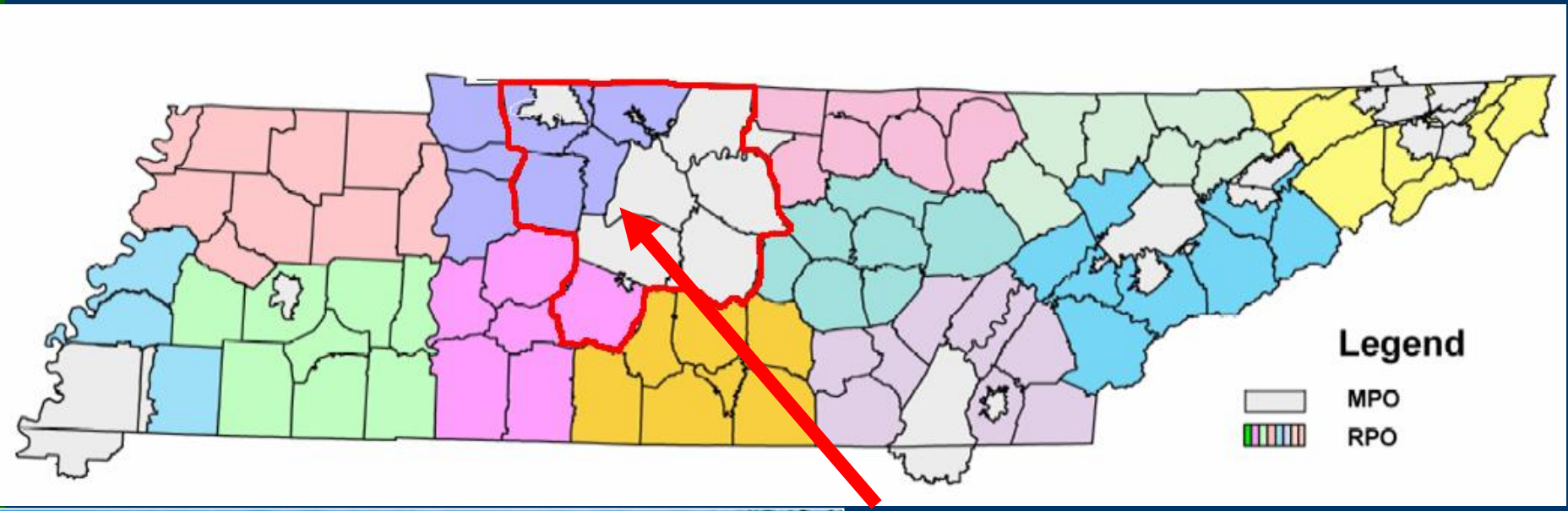
Executive Seminar

Transporation and Land Use

State of the **Practice**

New Jersey. Tennessee. California. Michigan. Pennsylvania

Tennessee



10-county region surrounding Nashville

“QUALITY GROWTH”

Tennessee

A Comparison of the Two Scenarios:

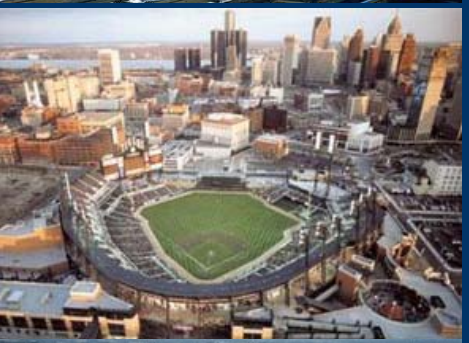
	BASE CASE	ALTERNATIVE
Land we will consume:	365,000 acres	91,000 acres
Infrastructure costs:	$6,957,085,995	$3,406,798,045
New road miles:	4,544 miles	2,225 miles
Acres of new impervious surface:	62,444 acres	35,033 acres
Vehicle Miles Traveled per day:	39 miles	35.9 miles

Alternative scenario saves tax dollars AND land

The Michigan Land Use Leadership Council - Recommendations

- Main Street Program- management assistance for downtowns
- Cool Cities Program - catalyst grants to attract the “creative class”
- Tax-increment Financing and Downtown Development Authorities
- Joint planning commissions, distributing land uses between cities

Michigan Transportation Recommendations



Provide a Wide Variety of Transportation Choices.

Strengthen and direct development toward existing Communities.

- **Fix-It First**
- **Asset Management**
- **Divisive debate over suburban interchanges**

China Experience

China Statistics

- 1.3 billion population
  - 800 m rural ($400/year income)
  - 400 m urban ($1,000/year income)
- 9% economic growth (GDP) rate for 25 years
- Accounted for 45% of world-wide cement demand in 2004
- Contains 9 of 10 worst air-polluted cities in world

Roadway Safety

- 8 million bicycles
- 2.4 million vehicles
- 64% increase in auto registrations in 2004
- 100,000 annual fatalities (vs. 47,000 in U.S.)


2005
TAXI
TAXI


前门东大街
(前门)
正义路
(东长安街)
正义路南口
妇科诊疗中心
66551166

Shanghai Development

- 20% of world's construction cranes in China

  (half are in Shanghai)
- 3500 office skyscrapers built in last 10 years
- 2000 high-rise apartments & office buildings under construction

Shanghai Open Space

- Now 15%
- Goal 35%


JVC
上海大剧院
SHANGHAI GRAND THEATRE

Shanghai Transportation

- Freeways - three ring roads/twelve radials :
  - 660 km by end of 2005
  - 853 km by end of 2010
- Public Transportation
- Pudong Airport
- Port of Shanghai
- Rail Freight System
- High Speed Maglev (“toy” or real component?)


新湖明珠号
SINHOO PEARL TOWN
Shanghai Transrapid

Right-Sizing

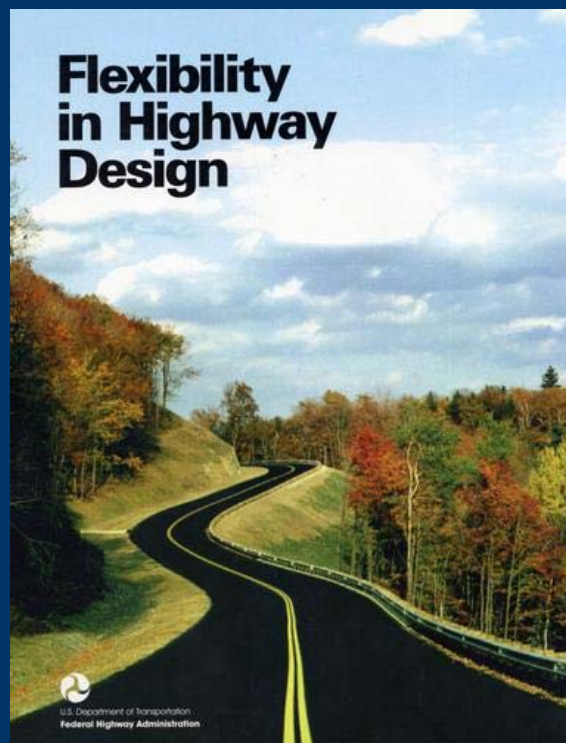
Right-Sizing Pro-Teams

- Right Scope
- Right Cost
- Right Schedule

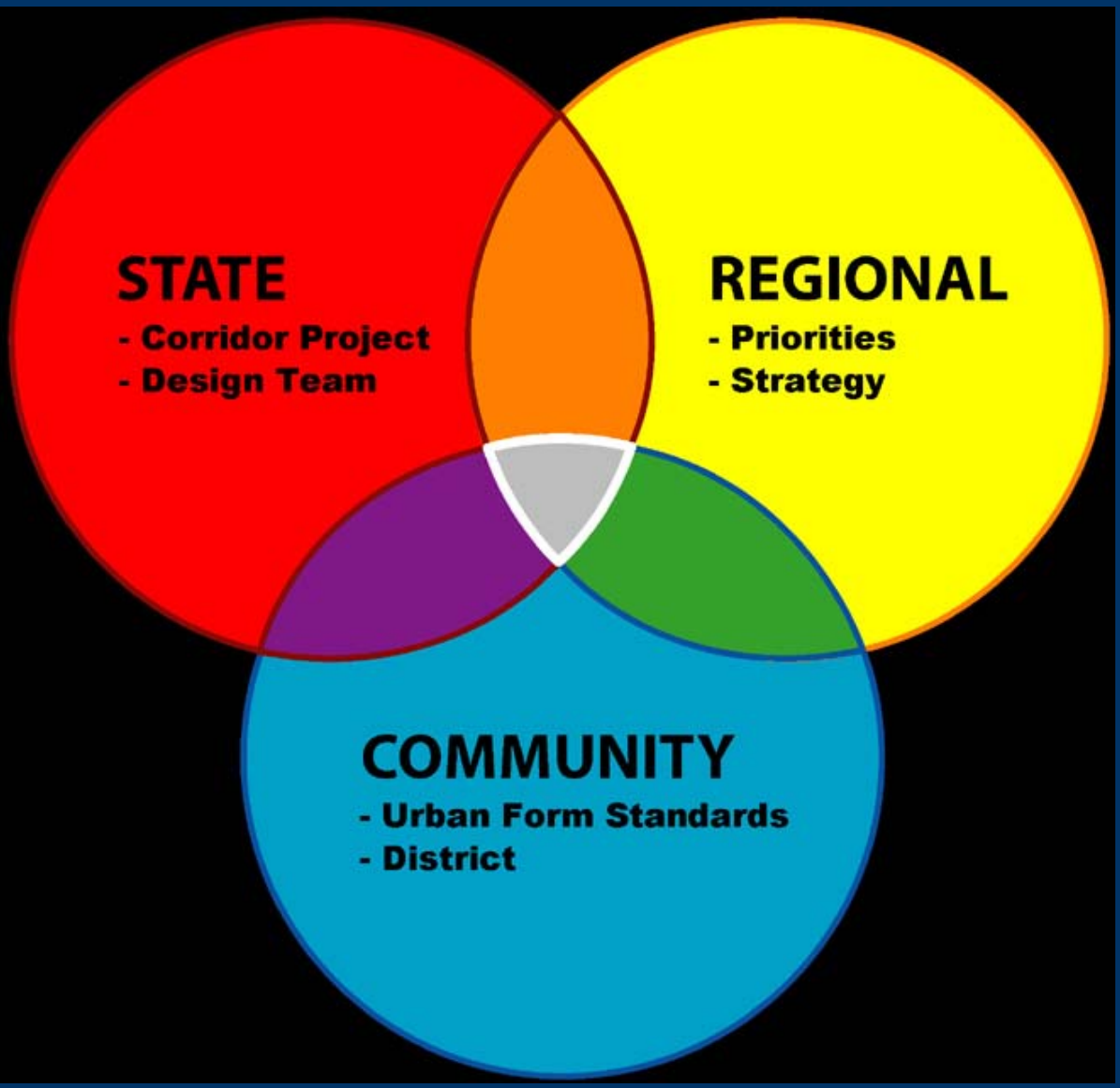
Context Sensitive Solutions

Context Sensitive Solutions

- FHWA Flexibility in Highway Design
- AASHTO Guide for Achieving Flexibility in Highway Design
- International Symposium on Geometric Design
- TRB Seminar on Land Use and Transportation
- 2006 CSS Conferences
  - AASHTO/FHWA
  - ASCE



Strong Partnerships Needed



- Local Leadership
- PA Planners
- Counties
- Municipalities


Our Goal: Affordable and Quality
Transportation That Serves Everyone