



# Context Sensitive Solutions - An Approach to Saving Money?

*COMPASS*  
2009 Education Series

Boise, ID

April, 2009



**From the Margins  
to the Mainstream**

A Guide to Transportation Opportunities in Your Community



# Making CSS the Norm

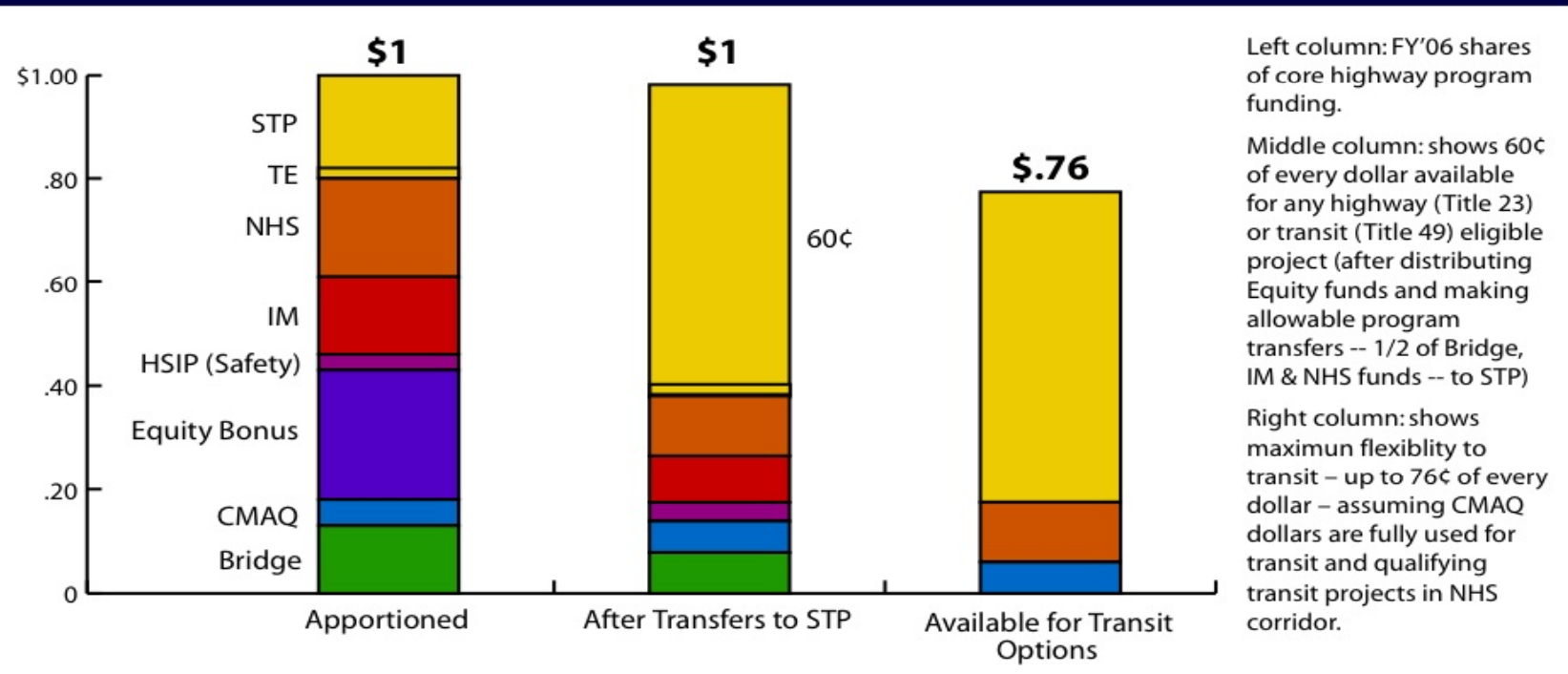
- o Understanding the Money
- o Using the Statute
  - o Under Current Law
  - o EPA Stormwater Revolving Fund
- o Using ARRA Funds
  - o Transp. Enhancements
- o Flexible Design





# Flexibility of Federal Funds

## Federal Highway Dollars are Flexible





# The Money

- o Transferability of federal funds among programs
- o Broad Eligibility for CSS activities
  - Safe Routes for School
  - Transportation Enhancements
  - Congestion Mitigation / Air Quality
  - Safety
  - Surface Transportation Program
  - Equity Bonus
- o Funds allocated to COMPASS





# FY 2009 Federal Funding Facts

- o Idaho apportionment est. \$ 227.9 M for core programs
  - o \$55.9 Million in STP funds
    - \$6.6 M sub-allocated to Boise Metro area
    - \$5.6 M for Transportation Enhancements
  - o \$12.2 M for Cong. Mitigation & Air Qual.
  - o \$10.1 M for Safety
  - o \$1.0 M for Safe Routes to School



# Idaho DOT ARRA Funding

- o **ID DOT received** **\$181.9 M**
- o **Sub-allocation to Boise** **\$11.5 M**
- o **Set-aside for Transportation Enhancements**  
**\$5.5 M**



## New Opportunities to Fund Green Streets

- o EPA will be administering FY09 SRF funds: about \$5 billion for clean water SRF and about \$1B for drinking water SRF
  - o Green Street projects can be submitted under this project, which has more lenient deadlines
- o Upcoming reauthorization of the SRF
  - o Potential mandatory set aside for green infrastructure, which will mean more opportunities in out years

Source: EPA



# It's A New World

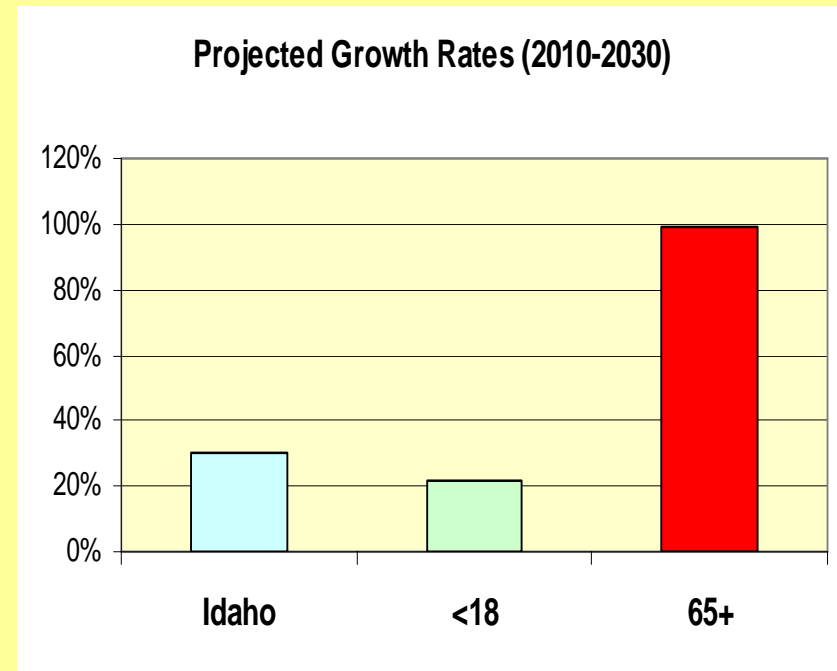
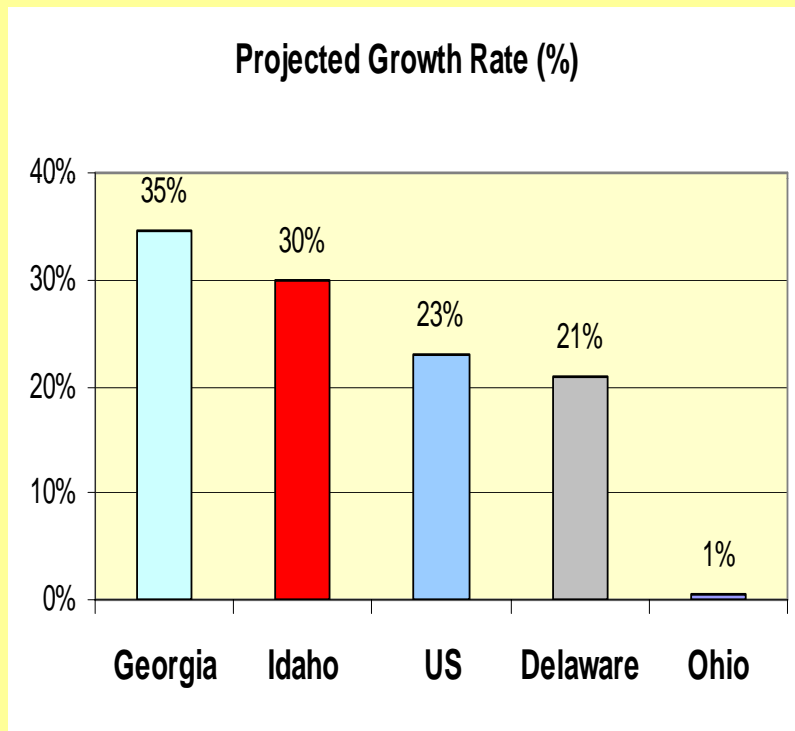
- o Changing Demographics
- o Restraints on Fossil Fuel Use and Climate Emissions
- o Safety Comes First
  - o Dramatic Reduction in Fatalities & Injuries
- o Understanding Transportation Costs
  - o Project cost drivers
  - o Household transportation costs
- o Investing instead of Spending
  - o Providing the backbone for 21<sup>st</sup> C prosperity
    - Creating value for customers
    - Creating value for communities





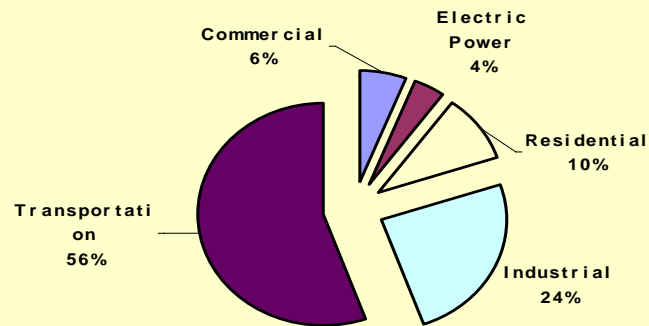
# Demographic Changes

(2010 – 2030)

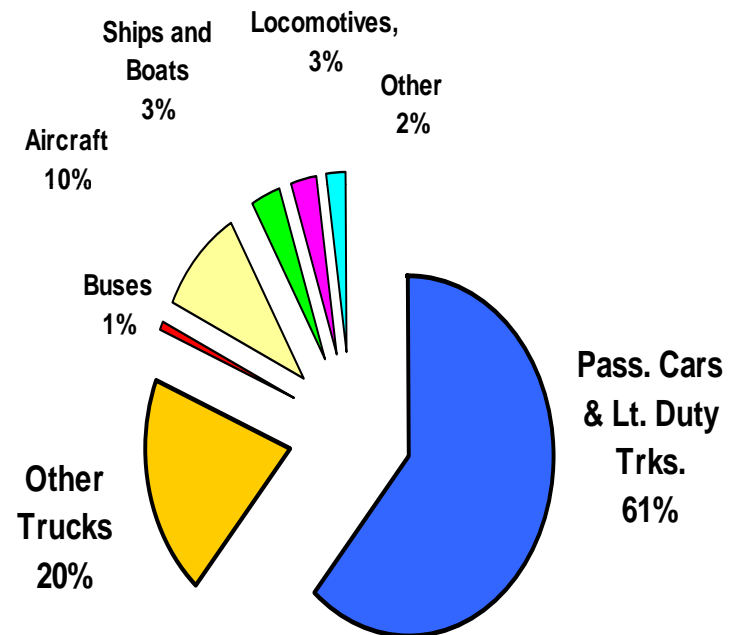




# Idaho CO<sub>2</sub> Emissions (2005)



■ Commercial 
 ■ Electric Power 
 ■ Residential 
 ■ Industrial 
 ■ Transportation



Source: DOE, EIA



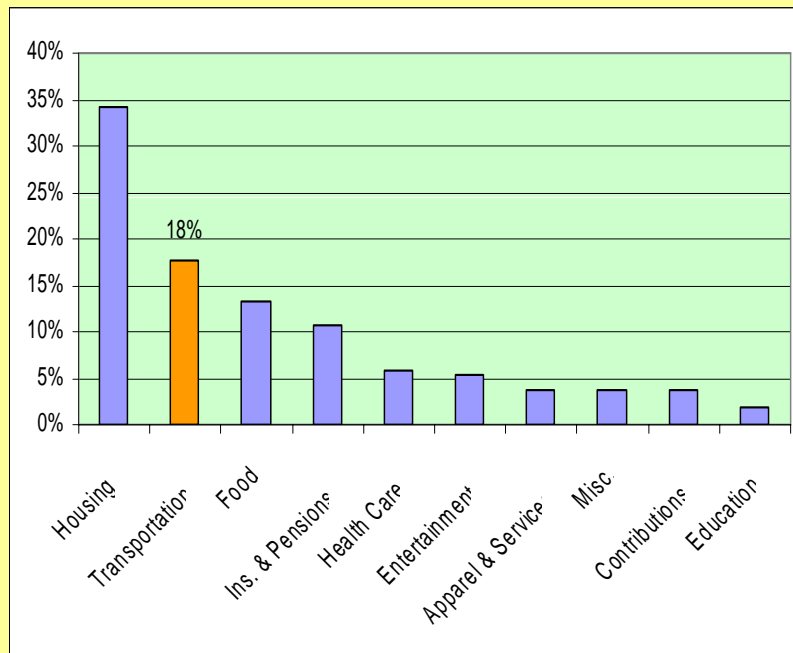
## Reducing Fatalities & Injuries = #1 Priority



- o Fatalities declining
  - o 2005 - 275
  - o 2006 - 267
  - o 2007 - 252
  - o 2008 - ?
- o 2012 Goal – 168
- o Design to Reduce Speed and Create Safer Places



# How People Spend Their Money



Source: Bur. Labor Statistics,  
Cons. Expend. Survey 2007

- ❖ On average households spend **18%** of their income on transportation.
- ❖ In automobile dominated regions, this figure can exceed **30%** - often more than a family spends on housing
- ❖ Income for **55%** of Idaho households is less than **\$50,000** (2007 ACS)



## Maybe It's Time for a New Framework

"The problems we have created cannot be solved with the same thinking that created them...."

Albert Einstein



# Rethinking the Transportation Mission

- o FROM
  - o A highway's primary purpose is to move people and goods safely to their destination as efficiently as possible to meet the needs of the motorist
  - o Focusing on projects
  - o A low regard for system plan and outcomes
  - o Relying on one mode for many different types of trips and a wide range of travelers
  - o Reluctance to address impact of land-use patterns on travel demand
  - o Little accountability for meaningful outcomes



# Rethinking the Transportation Mission

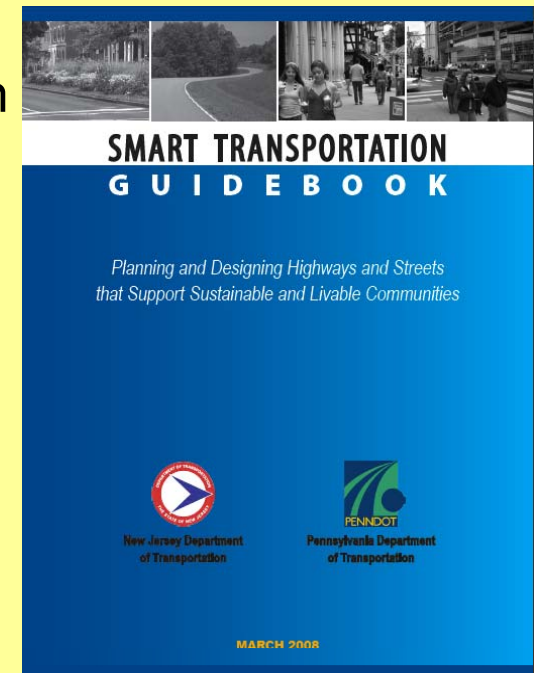
- o TO
  - o Envision a system that uses all modes
  - o Address the different transport needs of a range of constituents
  - o Add value to the public domain and entice private investment
  - o Accountable for outcomes that matter
  - o Build partnerships with local communities and the public to help people prosper





# Building on Smart Transportation Principles

1. **Money** counts
2. Choose projects with high **value** price ratio
3. Enhance the **local** network
4. Look beyond **LOS**
5. **Safety** first, and maybe safety only
6. Accommodate **all** modes
7. Leverage and preserve **existing** investments
8. Build **towns** and not sprawl
9. Understand the **context**; plan and design within the context
10. Develop local governments as strong land use **partners**







## COST REDUCTION AND CSS

Route 31 Hunterdon County, NJ

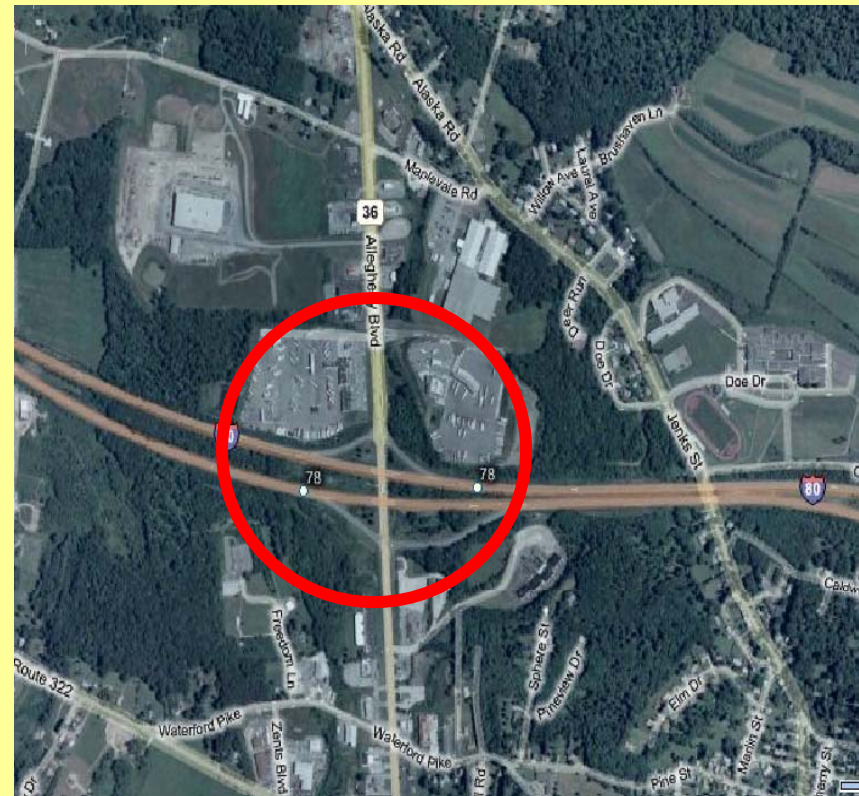


- o The cost of the 70 mph design speed freeway was about \$150 million.
- o The two lane, 35 mph at grade parkway that replaced it was half that.
- o The principle of rightsizing to save dollars applies no matter why we do it ... Money saved is money saved. (Gary Toth)



# I 80 – SR 36 Interchange (PA)

- o Upgrade existing interchange of SR36 with Interstate 80
- o Initially designed with full compliance to DM-2
- o After adoption of policy that relaxed DM-2 compliance and coordination with FHWA, interchange design was revised to satisfy AASHTO requirements
- o \$3.1 M cost savings





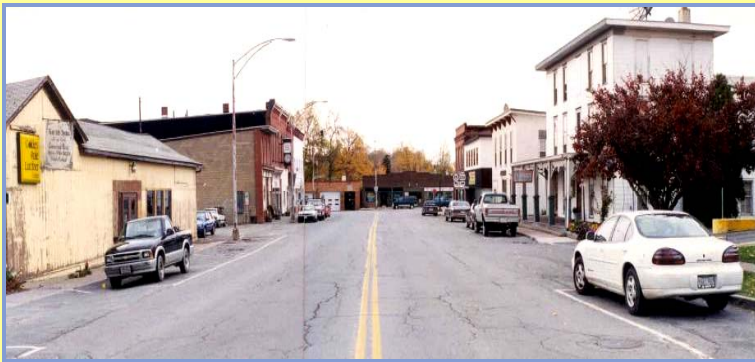
# Smart Transportation is Less Expensive



- o Make better use of the land that is already disturbed,
- o Extend the village concept & create opportunities for other transportation modes.
- o Might require land use changes as well as commitments from landowners.
- o The DOT can play a substantial role in helping facilitate these adjustments.
  - o “We already know we can’t widen the road—so how can we solve the problem in other creative and collaborative ways?” PA DOT Smart Transportation



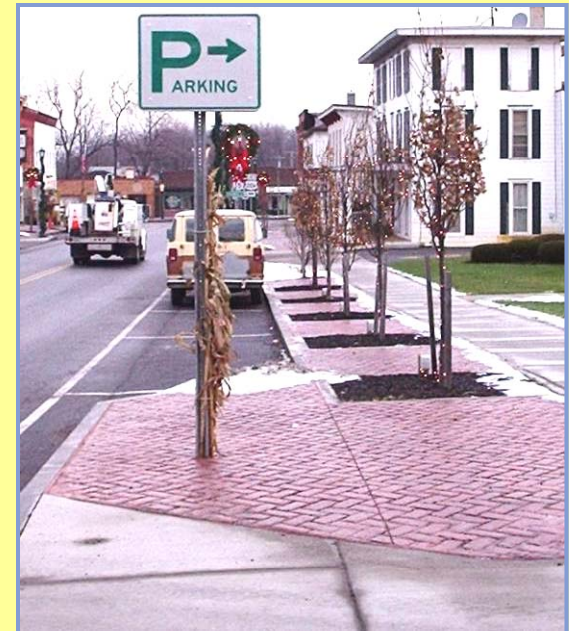
# Leverage Transportation Investment



**Problem:** Strip commercial and residential developments were identified as a root cause for the decline of the Village of Livonia, N.Y. (1998)

**New Vision:** A key element of the combined vision of the Town of Livonia and the Village was to re-establish the Village as the communities economic and social center.

**Tools to Achieve Vision:** NYSDOT-supported capital improvements, such as sidewalks and tree planting, have brought the Village closer to achieving its vision.



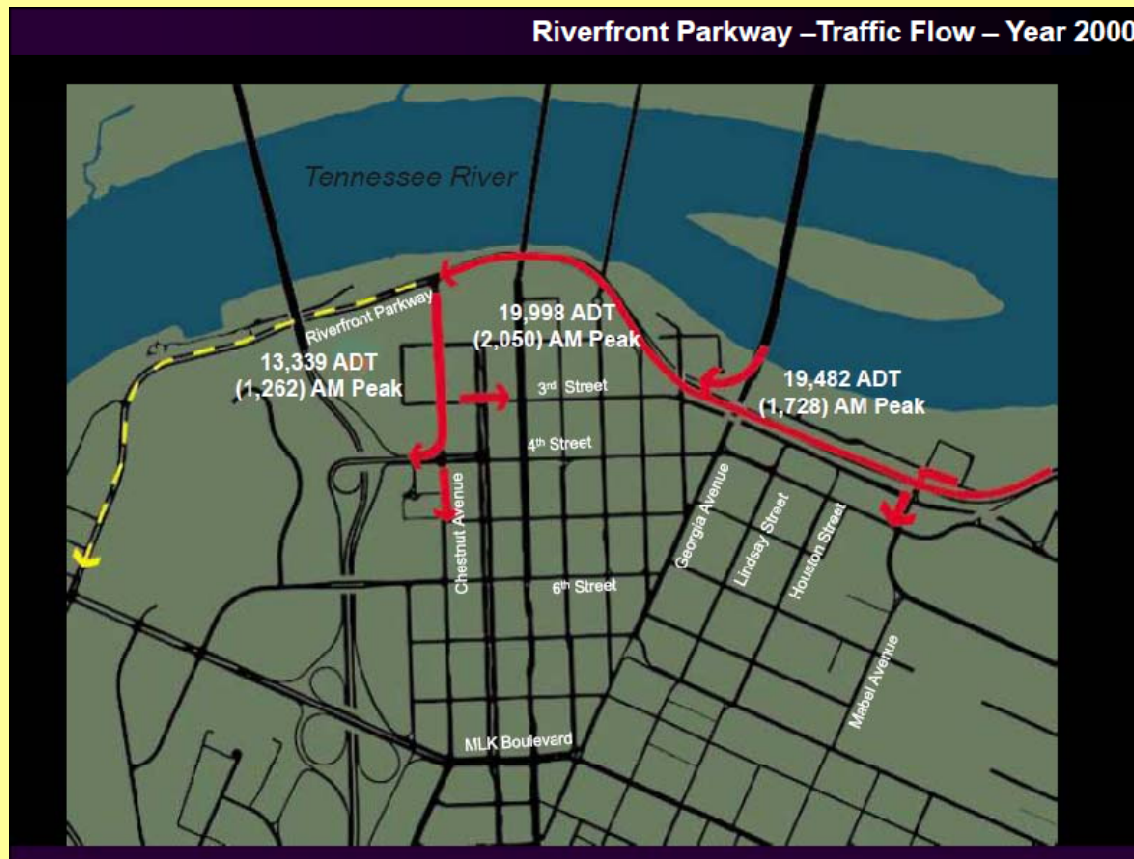


# Making CSS Happen Chattanooga, TN

**Riverfront Parkway**  
Transportation Urban Design Plan  
Community Workshop November 6-8, 2000

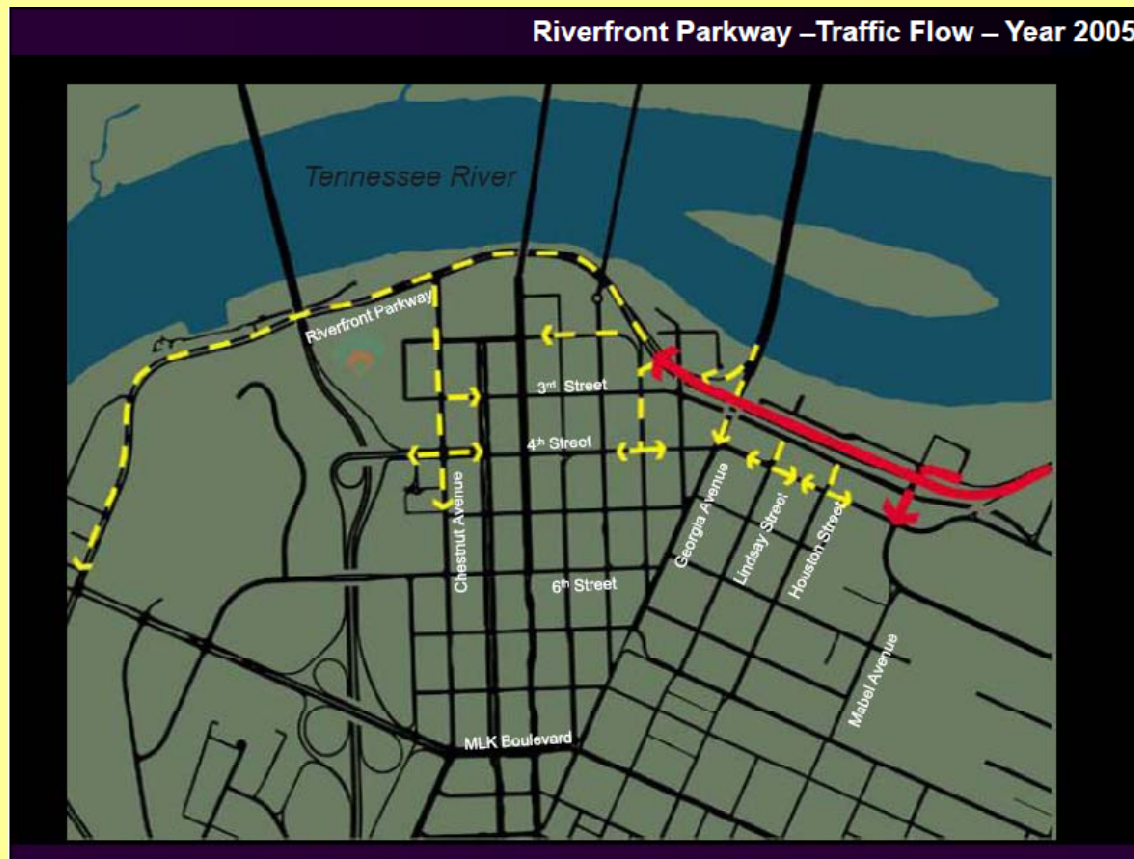


# Riverfront Parkway Chattanooga, TN





# Riverfront Parkway More Options, Better Results





# Celebrate Success!

**PROJECT COST - \$120,000,000 PAID WITH:**  
\$53,800,000 FROM PRIVATE CONTRIBUTIONS; \$56,000,000 FROM HOTEL TAX;  
\$4,000,000 FROM LAND SALES & PARKING REVENUE; \$6,200,000 FROM FEDERAL & STATE FUNDING;  
\$0 FROM CITY OF CHATTANOOGA GENERAL FUNDS.



**COMPLETION DATE: May 2005**



**21<sup>st</sup> Celebrating Chattanooga's  
Century Waterfront**

**Grand Opening  
Saturday, May 14**





# Land-uses Drive Transportation Costs



- o Auto based transportation fosters separated, low-density/intensity uses, sparse hierarchies of roads, disconnected local networks, etc. This pattern has proven to be **astoundingly expensive to build and maintain.**



# Clear Roles for Each Partner

## MPO

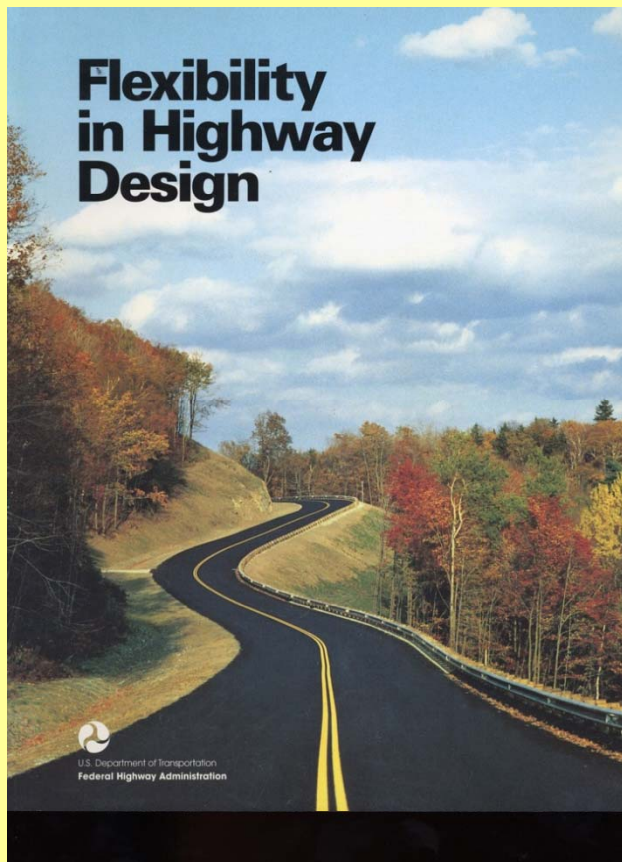
- o Work with municipalities to understand their land development decisions and limitations.
- o Understand the community's planning and transportation goals, and identify project alternatives that respect these goals.
- o Develop outreach techniques and educational tools with local governments.

## Local Government

- o Improve local network connectivity.
  - o Encourage mixed-use and transit-friendly developments.
  - o Consider access management ordinance.
- o Promote alternative modes of transportation.
- o Plan regionally working with all levels of government.
- o Coordination of operational improvements.
  - o Maintain efficient signal system.



# Flexibility Supports CSS

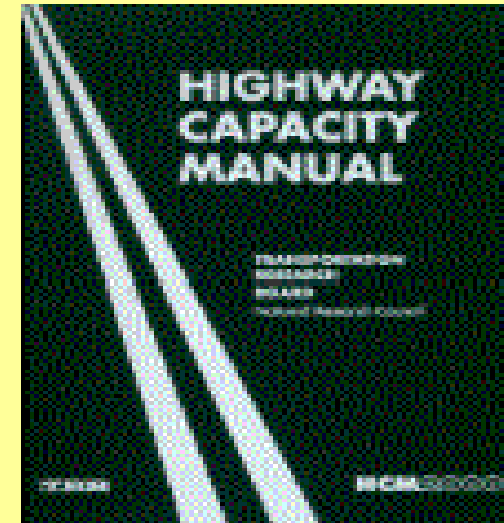


- o Functional Classification
  - not an exact science
- o Design Speed
- o Cross Section & Alignment
  - o Lane widths, clear zones
- o Design vehicle



# Beware of the Model

- o Challenge Growth and Buildout Numbers
- o Did they adjust for Walkability & Mixed Use
- o If they are going to use a model, don't let them do it on the cheap!
- o Don't let the model tell you how wide your streets should be
- o You tell the modelers how wide your streets will be, and have them to tell you where the congestion is
- o Then you decide what to do about the congestion





# Lower Design Speeds Mean Smaller Clear Zones





# The High Price of Level of Service C / E



C      Difference Between Level of Service      E

Do we need 24/7/365?



# Actions to Advance Context Sensitive Solutions

- o Review project selection/prioritization process
  - o ID DOT and COMPASS
- o Legislation that links LR Plan to Program (STIP/TIP)
- o Adopt performance criteria
  - o Water quality, energy, GHG emissions, health/physical activity, access to non-highway transport, tax treatments
- o Enact TOD and TID and 'Complete the Street' legislation
  - o OR, MD, MA, CT, CA, NJ, HI
- o New partnerships with local governments to integrate land-use and transportation
- o Provide grants for land-use planning to local communities



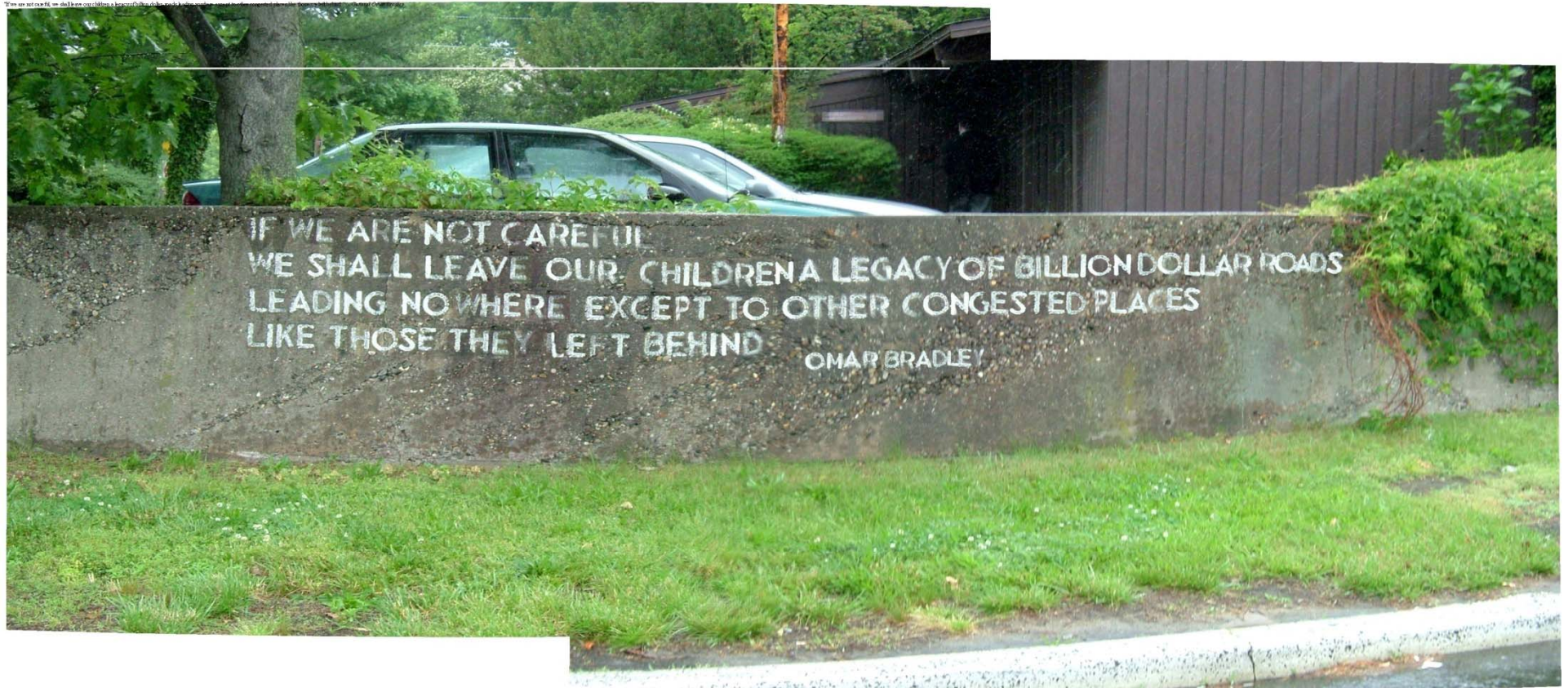
# Smart Transportation Checklist

Which principle(s) of Smart Transportation does the project incorporate? (Check all that apply).

- Emphasizes cost effective solutions that are scaled to the size of the problem.
- Emphasizes context sensitive design elements.
- Project has a high value/price ratio.
- Enhances local network.
- Level of Service optimizes the function of the roadway with the surrounding land use.
- Emphasizes safety.
- Emphasizes intermodal connections.
- Leverages/preserves existing investments.
- Improves quality of living by promoting town centers and decentralizing sprawl.
- Develops partnerships with local governments that promote strong land use plans.

o Source: PA DOT Smart Transportation application form





Thank you for listening



# Resources

- o Chattanooga
  - o <http://www.chattanoogachamber.com/GetToKnowUs/riverfront.asp>
- o Complete Streets
  - o <http://www.completestreets.org>
- o PA DOT Smart Transportation
  - o <http://www.smart-transportation.com/>
- o STPP
  - o <http://transact.org/>