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

Surface Transportation Policy Partnership  www.transact.org
Making CSS the Norm

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

Surface Transportation Policy Partnership  www.transact.org
Flexibility of Federal Funds

Federal Highway Dollars are Flexible

Left column: FY'06 shares of core highway program funding.

Middle column: shows 60¢ of every dollar available for any highway (Title 23) or transit (Title 49) eligible project (after distributing Equity funds and making allowable program transfers -- 1/2 of Bridge, IM & NHS funds -- to STP)

Right column: shows maximum flexibility to transit -- up to 76¢ of every dollar -- assuming CMAQ dollars are fully used for transit and qualifying transit projects in NHS corridor.

Surface Transportation Policy Partnership  www.transact.org
The Money

- Transferability of federal funds among programs
- Broad Eligibility for CSS activities
  - Safe Routes for School
  - Transportation Enhancements
  - Congestion Mitigation / Air Quality
  - Safety
  - Surface Transportation Program
  - Equity Bonus
- Funds allocated to COMPASS
FY 2009 Federal Funding Facts

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

Surface Transportation Policy Partnership  www.transact.org
Idaho DOT ARRA Funding

- ID DOT received $181.9 M
- Sub-allocation to Boise $11.5 M
- Set-aside for Transportation Enhancements $5.5 M
New Opportunities to Fund Green Streets

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

Source: EPA
It’s A New World

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

Surface Transportation Policy Partnership www.transact.org
Idaho CO$_2$ Emissions (2005)

Transportation 56%

Commercial 6%
Electric Power 4%
Residential 10%
Industrial 24%

Pass. Cars & Lt. Duty Trks. 61%
Other Trucks 20%
Buses 1%
Aircraft 10%
Ships and Boats 3%
Locomotives, 3%
Other 2%

Source: DOE, EIA

Surface Transportation Policy Partnership www.transact.org
Reducing Fatalities & Injuries = #1 Priority

- Fatalities declining
  - 2005 - 275
  - 2006 - 267
  - 2007 - 252
  - 2008 - ?
- 2012 Goal – 168
- Design to Reduce Speed and Create Safer Places
How People Spend Their Money

- 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

- FROM
  - 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
  - Focusing on projects
  - A low regard for system plan and outcomes
  - Relying on one mode for many different types of trips and a wide range of travelers
  - Reluctance to address impact of land-use patterns on travel demand
  - Little accountability for meaningful outcomes
Rethinking the Transportation Mission

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

Surface Transportation Policy Partnership  www.transact.org
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

Surface Transportation Policy Partnership

www.transact.org
COST REDUCTION AND CSS

The cost of the 70 mph design speed freeway was about $150 million.

The two lane, 35 mph at grade parkway that replaced it was half that.

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)

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

- Make better use of the land that is already disturbed,
- Extend the village concept & create opportunities for other transportation modes.
- Might require land use changes as well as commitments from landowners.
- The DOT can play a substantial role in helping facilitate these adjustments.
  - “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

Surface Transportation Policy Partnership  www.transact.org
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

Surface Transportation Policy Partnership  www.transact.org
Riverfront Parkway
More Options, Better Results

Surface Transportation Policy Partnership  www.transact.org
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;
$50 FROM CITY OF CHATTANOOGA GENERAL FUNDS.

COMPLETION DATE: May 2005

21st Century Waterfront

Grand Opening
Saturday, May 14

Surface Transportation Policy Partnership

www.transact.org
Land-uses Drive Transportation Costs

- 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

<table>
<thead>
<tr>
<th>MPO</th>
<th>Local Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>o Work with municipalities to understand their land development decisions and limitations.</td>
<td>o Improve local network connectivity.</td>
</tr>
<tr>
<td>o Understand the community’s planning and transportation goals, and identify project alternatives that respect these goals.</td>
<td>o Encourage mixed-use and transit-friendly developments.</td>
</tr>
<tr>
<td>o Develop outreach techniques and educational tools with local governments.</td>
<td>o Consider access management ordinance.</td>
</tr>
<tr>
<td></td>
<td>o Promote alternative modes of transportation.</td>
</tr>
<tr>
<td></td>
<td>o Plan regionally working with all levels of government.</td>
</tr>
<tr>
<td></td>
<td>o Coordination of operational improvements.</td>
</tr>
<tr>
<td></td>
<td>o Maintain efficient signal system.</td>
</tr>
</tbody>
</table>
Flexibility Supports CSS

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

Surface Transportation Policy Partnership  www.transact.org
Beware of the Model

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

Do we need 24/7/365?

C

Difference Between Level of Service E

Surface Transportation Policy Partnership  www.transact.org
Actions to Advance Context Sensitive Solutions

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

Source: PA DOT Smart Transportation application form
Thank you for listening

Surface Transportation Policy Partnership  www.transact.org
Resources

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