

# US DOT's Congestion Initiative

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*Forum on  
“Reducing Traffic Congestion – Real Opportunities  
from Europe and the U.S.”*

Seattle, June 21, 2007

# The Costs of Congestion

- **The financial cost of congestion:**
  - 3.7B hours of delay and 2.3B gallons of wasted fuel annually\*
  - Almost \$200B after accounting for unreliability, inventory, and environmental costs across all modes\*\*
- **Congestion hurts family / civic life, impacting:**
  - Where people live and work
  - Where they shop
  - How much they pay for goods and services



Congestion on I-95 in Northern Virginia

\* Texas Transportation Institute, 2005 Urban Mobility Report

\*\* USDOT internal analysis

# A Virtual “Congestion Tax” on Large Urban Areas

Metro Area	Total Cost (\$ millions)	Cost Per Peak Traveler
Los Angeles-Long Beach-Santa Ana CA	\$10,686	\$1,598
San Francisco-Oakland CA	\$2,604	\$1,224
Washington DC-VA-MD	\$2,465	\$1,169
Atlanta GA	\$1,754	\$1,127
Houston TX	\$2,283	\$1,061
Dallas-Fort Worth-Arlington TX	\$2,545	\$1,012
Chicago IL-IN	\$4,274	\$976
Detroit MI	\$2,019	\$955
Miami FL	\$2,485	\$869
Boston MA-NH-RI	\$1,692	\$853
Phoenix AZ	\$1,295	\$831
New York-Newark NY-NJ-CT	\$6,780	\$824
Philadelphia PA-NJ-DE-MD	\$1,885	\$641
<b>Seattle</b>	<b>\$1,237</b>	<b>\$792</b>

## The USDOT Congestion Initiative

- 1. Execute “Urban Partnership Agreements” with 1-5 major metro areas**
- 2. Encourage States to consider enacting public private partnership laws**
- 3. Develop new interstate highway and rail capacity through a “Corridors of the Future” competition**
- 4. Reduce bottlenecks at major freight gateways, including Southern California**
- 5. Find and implement solutions to border congestion**
- 6. Accelerate major airport capacity projects, reform airport pricing policies and overhaul the air traffic control system**

# The Urban Partnership Agreement (UPA)

## The "4 Ts"

1. Establishment of a variable tolling or congestion pricing demonstration
2. Utilization of cost-effective transit options (such as BRT)
3. Expansion of teleworking and flexible work schedules
4. Utilization of cutting-edge technology and operational approaches

*On June 7 USDOT announced that the Seattle area is one of 9 short-listed applicants for Urban Partnership status*



# The Urban Partnership Agreement

## (1) Tolling or Congestion Pricing Demonstration



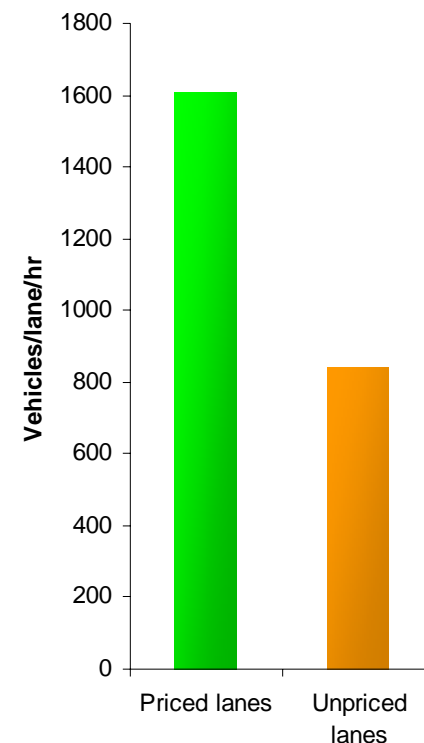
- **Goal**
  - **Maintain free-flow conditions on highways**
- **Key elements**
  - **Direct user charge based on use of facility**
  - **Charge varies based on level of congestion**
  - **Toll collection via electronic means (no toll booths)**
  - **Different configurations (cordon pricing, HOT lanes, etc.)**
- **Rationale**
  - **Demonstrated impact on congestion**
  - **Quick, cost-effective implementation**
  - **Takes advantage of travel time flexibility**

# Impact of Pricing on Congestion

- **Increased vehicle throughput**
  - **CA SR-91 priced lanes carry twice as many vehicles / lane during rush hour as the adjacent toll-free lanes**
- **Reduced traffic and increased travel speeds**
  - **London:** delay ↓30%, bus delay ↓50%, road speed ↑37%
  - **Stockholm:** traffic ↓25%, transit ridership ↑8%,
  - **Singapore:** peak hour traffic ↓13%, road speed ↑20%
  - **Minneapolis:** 85% of users happy with priced lanes' traffic flow

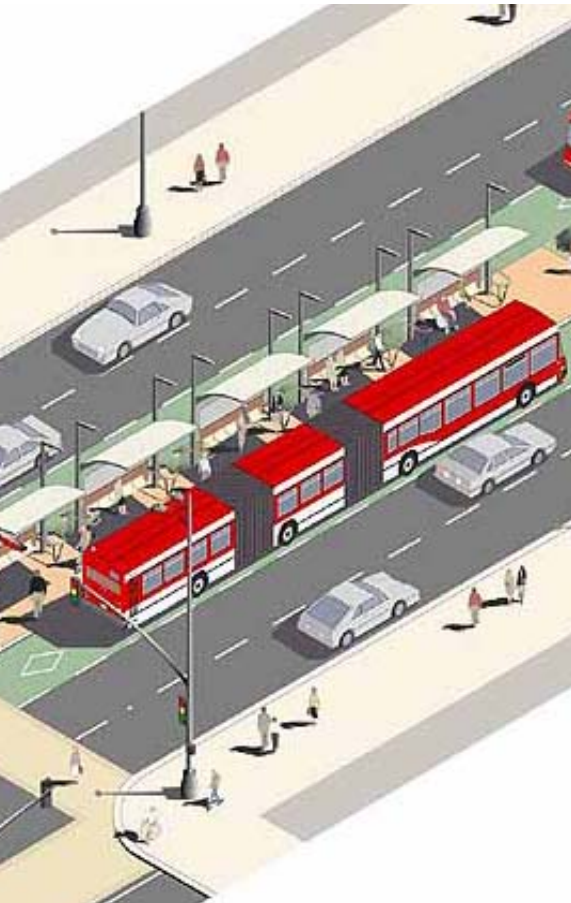
***A little less traffic (5%) can mean a lot less delay!***

Peak period throughput on California SR-91, priced vs. unpriced lanes



# USDOT's Urban Partnership Agreement

## (2) Transit Utilization Options



- **Goal**
  - Provide a convenient, comfortable, and cost-effective alternative to personal automobile travel
- **Key elements**
  - High-quality bus service in free-flow lanes
  - Improvements to stations, vehicles, and fare collection
- **Rationale**
  - Easy implementation due to limited capital costs
  - Meet mobility needs of former peak period drivers
  - Free-flow conditions improve BRT performance & reliability
  - Increased ridership, cost-efficiencies, and (potentially) dedicated toll revenues strengthen transit funding base

# USDOT's Urban Partnership Agreement

## (3) Teleworking Expansion

- **Goal**
  - Reduce peak period commuting on highways
  
- **Key elements**
  - Commitment by major employers to expand teleworking and flexible work schedules
  - Different configurations (work from home, telework centers, etc.)
  
- **Rationale**
  - Ease and cost-effectiveness of implementation
  - Popularity of working from home
  - Demonstrated reductions in peak driving



# USDOT's Urban Partnership Agreement

## (4) Use of Technology and Operational Approaches



Dynamic messaging sign  
in Madison, WI

- **Goal**
  - Utilize technological and operational tools to enable pricing and other congestion-reduction measures
- **Key elements**
  - Electronic toll collection to allow for system pricing without congestion-causing tollbooths
  - Technologies to enable more informed choices by travelers (e.g., real-time multi-modal transportation info)
  - Operational strategies (e.g., reversible lanes, improved incident response) to add capacity during peak periods
- **Rationale**
  - New technologies and operational approaches offer the potential to significantly reduce congestion

# 21<sup>st</sup> Century Operations

## High Performance System Operations

### Out

- Reactive
- Project-focused
- Jurisdictions
- 8 hrs/day / 5 days/wk
- Output-oriented
- Historical info

### In

- Proactive
- Customer-focused
- Systems
- 24 hrs/day / 7 days/wk
- Performance-based
- Real-time info

- 40% of congestion is recurring.
- 60% of congestion is non-reoccurring. This is where operations can make a difference!

# High Performance System Operations (What will the next 20-30 years look like?)

- **Three key drivers of change are:**
  - **Real-time system information,**
  - **Performance-based decision making, and**
  - **The wide spread application of congestion pricing.**

# High Performance System Operations

## Real-Time System Information

- **Necessary to support active management,**
- **Move organizations from reactive to proactive mode and**
- **Create a basis for focusing on performance.**
  
- **Today there is limited coverage, distribution and management tools**
- **However, future Federal rulemaking will push for national consistency and the market for information will grow.**

# High Performance Systems Operation

## Performance-Based Decision-Making

- Will cause agencies to focus on the customer and provide open accountability
- Will clearly demonstrate the value of management and operations strategies,
- Also allows for a more multimodal approach to the value of investments in operations compared to capital improvements.
  
- Today, there is inconsistency in the quality and sources of data, and little agreement on performance measures.
- In the near term, the next surface transportation funding bill will likely see performance linked to federal funding. In addition, congestion management practices will be more closely linked to the operations planning process.
- In the long term, 20-30 years, one will see operational integration, simulation and visualization tools and effective regional collaboration.

# High Performance Systems Operations

## Congestion Pricing

- Will lead to customers having a choice of better highway service.
- An essential tool for just-in-time delivery and
- An important option for personal travel because priced facilities will yield a more reliable dependable trip.
  
- From an agency perspective, congestion pricing creates effective tools for:
  - demand management,
  - signals where investment is needed,
  - provides an added source of review and
  - increases the potential for public/private partnerships.

# High Performance Systems Operation

- **The industry and agencies have all the elements to create a high performance highway system, but getting there will be elusive due to institutional inertia, insufficient organizational capacity, and the public “Wow!” factor.**
- **A high performance highway system will happen because forces are slowly moving in that direction, but the question is how to make the changes move faster.**

## What USDOT Brings to the Table for Urban Partnership Program: Up to \$1.1 B in DOT Discretionary Grants

- **FTA Discretionary Programs (\$707 million)**
- **FHWA Discretionary Programs (\$272 million)**
- **RITA Discretionary Programs (\$100 million)**

## What USDOT Brings to the Table

### Other Potential Support

- **Another \$125 M in President's FY08 budget request**
  - **\$100 M for VPPP**
  - **\$25 M for ITS-OTMC**
  
- **DOT loans and credit assistance**
  - **Private Activity Bond authority**
  - **TIFIA loan and credit assistance**
  
- **Other support**
  - **Authority to price portions of the Interstate**
  - **Sponsorship of projects by senior departmental leadership**
  - **Expedited project delivery (e.g., Environmental Stewardship Executive Order)**
  - **Extensive technical expertise and advice**

# Schedule

- **Applications were due April 30, 2007**
- **June 8: 9 applicants were short-listed**
- **June 26: Puget Sound application to be discussed in more detail with Office of Sec**
- **August 8: Urban Partnerships announced**
- **September 15: VPPP grants announced**

**(Implementation 12-18 mos. after procurement)**