

## **ITEM 13 - Information**

September 20, 2006

### Briefing on Regional Management and Operations Strategies and Performance Measurement Concepts

#### **Staff**

**Recommendation:** Receive briefing on regional transportation system management and operations strategies and performance measurement concepts called for in SAFETEA-LU.

**Issues:** None

**Background:** John Mason, representing the Association of Metropolitan Planning Organizations (AMPO) on behalf of the Federal Highway Administration, will brief the Board on regional transportation system management and operations strategies and performance measurement concepts, and on the role of metropolitan planning organizations like TPB in advancing these strategies and concepts.

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*What if . . .*

**There were a way to make some near-term improvements to the regional transportation system?**

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September 20, 2006

John Mason

Representing

Association of Metropolitan Planning Organizations (AMPO)  
on behalf of the Federal Highway Administration



ASSOCIATION OF  
METROPOLITAN  
PLANNING  
ORGANIZATIONS

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# TPB vision



In the 21<sup>st</sup> Century, the Washington metropolitan region remains a vibrant world capital, with a

**transportation system that provides efficient movement of people and goods.**

This system promotes the region's economy and environmental quality, and operates in an attractive and safe setting – it is a system that serves everyone. The system is fiscally sustainable, promotes areas of

concentrated growth, **manages both demand**

**and capacity, employs the best**

**technology**, and joins rail, roadway, bus, air, water, pedestrian and bicycle facilities into a fully interconnected network.

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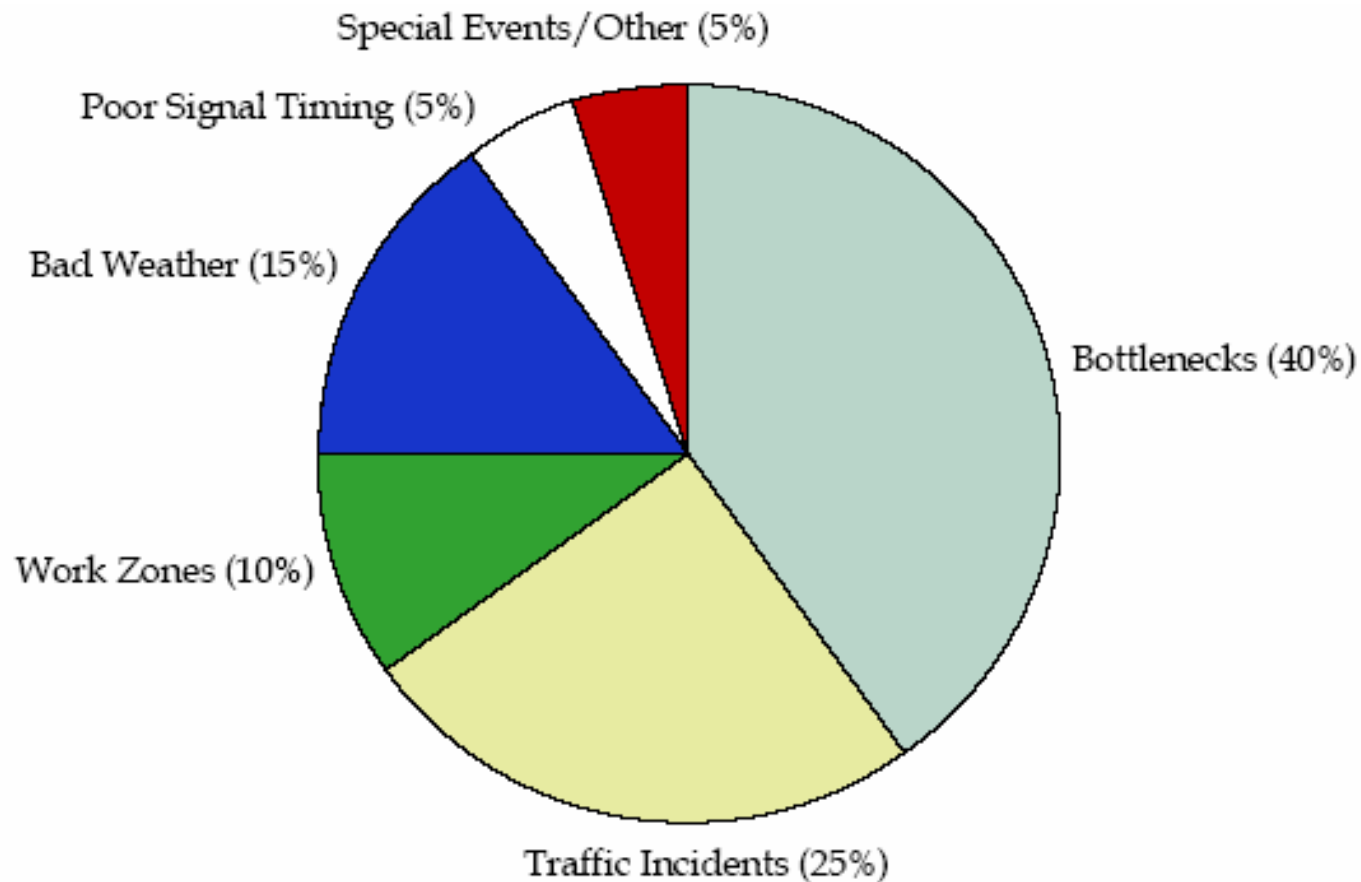
# Purpose



To highlight two features of SAFETEA-LU that reinforce TPB efforts:

- TSM&O
- Performance measurement

# Sources of congestion: National summary



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# What do our customers want?



- Travel smoothly and safely
- Be kept informed of conditions
- Timely information to make mode and route choices
- Goods moved efficiently and quickly
- Incidents detected and cleared quickly
- Well planned and executed emergency response
- Coordination of construction projects

Consistently across jurisdictional boundaries – NOW!

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# SAFETEA-LU recognizes challenge



Transportation plans shall include:

“Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods”

Note: Preferable term is management and operations (M&O) or TSM&O (Transportation System Management and Operations).

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# Two concepts to address challenge



1. **TSM&O** (Transportation Systems Management and Operations) – optimizing system performance
2. **Performance measurement**



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# What is TSM&O?



Integrated program to optimize performance of existing infrastructure through the implementation of multimodal and intermodal, cross-jurisdictional systems, services, and projects designed to

- ❑ Preserve capacity and
- ❑ Improve security, safety, and reliability

HR 5689 – Technical corrections to SAFETEA-LU

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# TSM&O includes:



- Traffic incident management
- Travel information services (road and rail)
- Freeway management
- Automatic vehicle location for transit
- Traffic signal coordination
- Work zone traffic management
- Roadway weather information
- Electronic payment (transit, parking, tolls, etc.)
- Freight management
- Coordination of highway, rail, transit, bicycle and pedestrian operations

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# TPB has begun addressing TSM&O



- Priority #1 – Interagency coordination for incident management
  - Regional Transportation Coordination Program (RTCP)
  - Regional Integrated Transportation Information System (RITIS)
- Priority #2 – Traffic signal optimization

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# What other regions are doing



- Traffic signal “optimization” >> coordination across the region
- Regional transportation concepts of operation
- Work zone coordination
- Traveler information
- Traffic incident management
- Data sharing
- Coordination of special events
- Anticipating the weather

# Why should an MPO measure performance?



- Federal law gives the MPO the lead for coordinating regional transportation
- MPO sets the regional transportation vision, goals, objectives
- MPO is a “neutral” observer; does not (typically) operate the system
- Measuring performance will improve investment decision making and credibility

“ . . . chart a course for every endeavor that we take people’s money for, see how well we are progressing, tell the public how we’re doing . . . Improve the things we think are worth investing in”

- President Clinton, 1993

## Characteristics of good performance measures



- **Value** to the “customer” (the users of the transportation system) – are the measures understandable and meaningful
- **Reliability** as indicators of whether goals and objectives have been satisfied
- **Simplicity**, to ensure that the measures are understandable, logical and repeatable

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# Illustrative performance measures



- Customer satisfaction
- Extent of congestion
- Delay – non-recurring
- Delay – recurring
- Incident duration
- Speed
- Throughput – person
- Throughput – vehicle
- Travel time – reliability
- Travel time – trip

# Federal funding supports TSM&O



- CMAQ
- STP
- Surface Transportation Congestion Relief Solutions (\$39M for research, training)
- ITS Research (\$110M per year)
- And don't forget operational considerations can be included in construction costs



# Potential next steps



- Strengthen collaborative planning process;  
engage operating agencies
- Develop measurable regional transportation system objectives and performance measures
- Increase investment in TSM&O solutions  
(consider in both short and long-term plans)
- Develop annual report to the region on system performance

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# A final thought



“Traffic congestion is essentially a regional phenomenon requiring regional approaches to mitigate its impacts”

- Anthony Downs, The Brookings Institute  
“The Need for Regional Anti-Congestion Policies”

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# Reference materials



- TSM&O Action Kit
- Optimizing the system – saving lives; saving time
- Show Me the Money: A Decision-Maker’s Funding Compendium for Transportation Systems Management and Operations
- Travel Time Reliability
- Getting More by Working Together – Opportunities for Linking Planning and Operations
- National Transportation Operations Coalition Performance Measurement Initiative

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# For more information



## ■ Reference materials

- ❑ Case studies
- ❑ Research by FHWA, TRB, AASHTO, AMPO

## ■ Websites

- ❑ <http://www.plan4operations.dot.gov>
- ❑ <http://www.ntoctalks.com>
- ❑ <http://www.ampo.org>