



Joint TransPort/ Regional Travel Options Committee/TSMO Policy Work Group

Wednesday, March 11, 2009

1:30 – 3:30 p.m.

ODOT Region 1

Meeting Notes

In Attendance

Jen Bachman (DKS), Adriana Britton (TriMet), Dan Bower (PBOT), Anthony Butzek (Metro), David Daily (C-Tran), Sandy Doubleday (Gresham), Marie Dodds (AAA Oregon), Adrian Esteban (RTO), Karen Frost (WTA), Jim Gelhar (Gresham), Mara Gross (CLF), Tu Ho (Beaverton), Derek Hofbauer (RTO), Bill Kloos (PBOT), Randy Knapick (IBI), Peter Koonce (Kittelson), Stephan Lashbrook (Metro), Joe Marek (Clackamas Co), Galen McGill (ODOT), Margaret Middleton (Beaverton), Dennis Mitchell (ODOT), Josh Naramore (Metro), Shawn Quayle (Kittelson), Pam Peck (Metro), Jim Peters (DKS Associates), Deena Platman (Metro), Nathaniel Price (FHWA), Willie Rotich (PDOT), Abbas Shafii (Washington Co), Sean Tevlin (Metro), Stacy Thomas (JLA), Jessica Tump (TriMet), Tom Tushner (Washington Co), Ron Weinman (Clackamas Co), Caleb Winter (Metro)

Workshop Introduction

Deena Platman opened the workshop with an overview of the agenda. Workshop participants included members of TransPort, RTO Subcommittee, and the TSMO Policy Work Group. TSMO plan process has advanced a regional vision, goals, principles and objectives, an assessment of needs, and a toolbox of potential strategies. Workshop goal was to narrow potential TSMO strategies down to ones that the region should focus on in the action plan development.

A couple of announcements were also made including:

- TransPort sponsored an application for economic stimulus funding to support replacement of signal controllers and updating of signal timing on 16 corridors in the region. OTC approved recommended list on 3/17/09.
- TransPort members agreed to support an OTREC research proposal to study climate change impacts on transportation infrastructure that builds on the current study.

Summary of Needs Assessment

Jim Peters gave a presentation on the needs assessment findings. A copy of the presentation is attached.

TSMO Strategies Toolbox for the Region

Peter Koonce gave a presentation on the TSMO toolbox of strategies as a lead in for the narrowing exercise. A copy of the presentation is attached.

TSMO Strategies Exercise and Discussion

Stacy Thomas facilitated an exercise and follow-up discussion on narrowing TSMO strategies. Each participant was given 18 dots and voted on strategies that they would like to see continued or advanced in the region. The votes were tallied and the group had a discussion about which strategies could be eliminated/push out to a future plan, which ones could be combined with other strategies, and which ones should be advanced to the next stage of development. The results of the exercise and discussion are attached.

Results of the March 11, 2009 TransPort Workshop

HIGH Priority Strategies

No.	Strategy	Priority Votes	Notes
A2	Advanced Signal Systems	23	
A4	Signal Retiming/Optimization	23	
AF7	Active Traffic Management	16	Other strategies will be added to AF7 including: <ul style="list-style-type: none"> • F19 Reversible Lanes • F20 Lane Controls/Temporary Shoulder Use • F24 Managing Bottlenecks • F29 Variable Speed Limits
AF10	Real-Time Traveler Info	15	
F16	Incident Management	23	
T37	Transit Signal Priority	18	

MEDIUM Priority Strategies

No.	Strategy	Priority Votes	Notes
A1	Access Management	14	
A6	Parking Management	11	
AF8	Event Management	5	
AF9	Integrated Corridor Management	14	
AF11	Real Time Traffic data Collection using Probe Data	7	
AF13	Automated Speed Enforcement	7	
AF14	Traffic Surveillance	6	
AF15	Emergency Management	10	
F26	Ramp Metering	10	
F27	HOV Ramp ByPass	5	Discussion to KEEP strategy, but application might be physically and geographically constrained by entrance ramps and available HOV lanes.
F28	Transportation Management Center	11	

TSMO Strategies

FR30	Real-Time Freight Information	8	
FR32	Truck Only Lanes	7	
FR33	Truck Signal Priority	7	
T35	Park and Ride Lots	6	
T36	Real-Time Transit Information	14	T39 Transit AVL will be included with T36, it is necessary for the traveler information component.
T38	Transit Only Lanes/Transit Queue Jump	14	
TO40	Mass Communication	8	
TO41	Individualized Marketing	7	
TO42	Traveler Information Marketing Campaigns	9	
TO43	Route Planning Tools (software)	7	
TO44	Employer Program	11	
TO45	Commuter Incentives	8	
TO46	Rideshare Services	10	
TO48	Urban Centers, Corridor and Industrial Area Investments	10	
TO49	Bicycle Signal Heads	8	Consider changing name to Separate Bike Phase
TO50	Bicycle Enhancements	10	

LOW Priority Strategies

No.	Strategy	Priority Votes	Notes
F17	Work Zone Management	4	
F23	Road Weather Information Systems	3	Moving forward with the idea this strategy is for weather stations (not snow plow tracking)

Strategies to be Considered for Potential Pilot Projects

No.	Strategy	Priority Votes	Notes
AF12	Intellidrive	6	Should be considered for a Pilot project
F18	Roadway Pricing	8	F18 and F21 can be combined into a new Roadway Pricing Category (High Occupancy Vehicle/Toll Lanes and New Toll

			Roads/Congestion Pricing). Also, F22 Electronic Toll Collection would be included in this category.
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Strategies NOT moving forward independently. These Strategies are either being combined with other strategies or they are being dropped from the 10 Year TSMO Plan

No.	Strategy	Priority Votes	Notes
A3	Changeable Lane Assignments	3	Moved to possible long term strategies (not in 10 yr TSMO plan).
A5	Red Light Cameras	1	Not moving forward with TSMO
F19	Reversible Lanes	7	Combined under AF7
F20	Lane Controls/Temporary Shoulder Use	4	Carried forward as a possible tool with AF7 (Active Traffic Management) as well as F16 and AF8 (Incident Management and Event Management)
F21	New Toll Roads/Congestion Pricing	13	Combined with F18 in a new category termed Roadway Pricing
F22	Electronic Toll Collection	5	Combined with F21 and F18 New Toll Roads/Congestion Pricing and High Occupancy Vehicle/Toll Lanes
F24	Managing Bottlenecks	17	Combined under AF7 (changed from Bottleneck Removal to Managing Bottlenecks)
F25	Ramp Closures	2	Not moving forward with TSMO
F29	Variable Speed Limits	14	Combined under AF7
FR31	Roadside Electronic Screening/Clearance Programs	4	Not moving forward with TSMO
FR34	Freight Vehicle Tracking - Automatic Vehicle Location (AVL)	0	Not moving forward with TSMO
T39	Transit Vehicle Tracking – AVL	3	Combined into T36 as a necessary component to provide real time transit information
TO47	Telecommuting	4	Not moving forward with TSMO

Discussion Outline

Defining needs for Transportation System Management and Operations (TSMO)

- Why we are here
- Scope of TSMO
- Summary of findings from needs assessment

Why Plan for Transportation System Management and Operations?

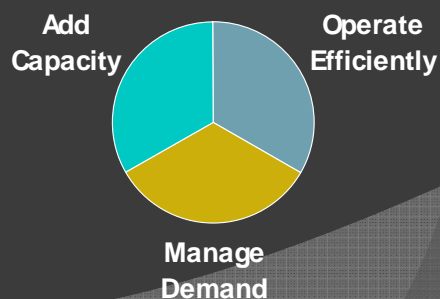
- Our challenge:
 - Get the most out of the infrastructure we have today
 - Technology
 - Respond to incidents
 - Adjust traffic signals
 - Provide choices

Our Vision for Transportation System Management and Operations

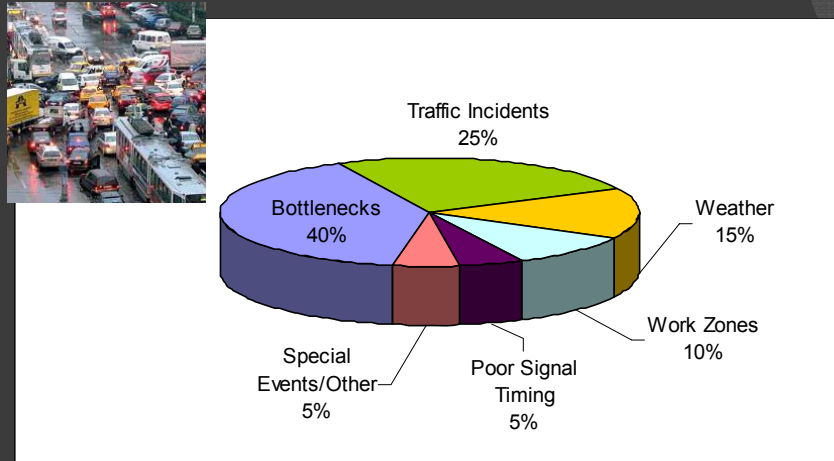
- Our vision:
 - Improve safety
 - Reduce crashes
 - More reliable travel times
 - More efficient people and goods movement
 - Provide transportation choices
 - Cleaner air

Defining Our Response to the Challenge

- We are here to...
 - Define strategies to manage congestion
 - Operate efficiently
 - Manage demand



Sources of Congestion

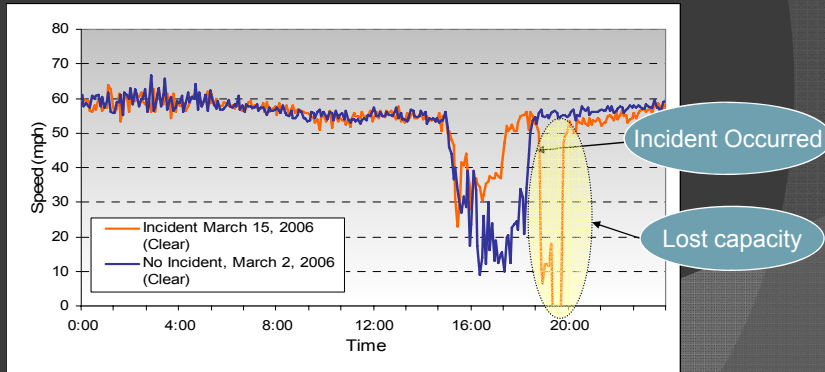


Lane Closures Significantly Affect Capacity

Number of Hwy Lanes	% of Facility Capacity Lost by Blockage Type			
	Shoulder	1 Lane	2 Lanes	3 Lanes
2	19%	65%	100%	N/A
3	17%	51%	83%	100%
4	15%	42%	75%	87%

Incident on I-5 NB at Portland Blvd

- Example of Reduced Capacity During Incidents
 - At 7pm on March 15, 2006, 2 NB lanes are blocked for 2 hours near N Lombard St.



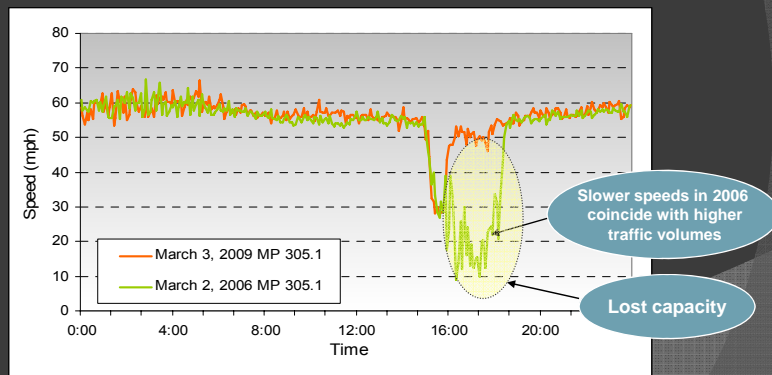
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Speed Profile at I-5 at Portland Blvd (March 2006 vs. March 2009)

- Example of how changes in traffic volume impact capacity and flow (2009 volume less than 2006 volume).



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Strategic Planning to Define What Makes up TSMO in our Region

- Analogy to backyard planning



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Provide Reliable Travel Times

- Operating Efficiently
 - Expand advanced signal timing
 - Pre-trip forecasted travel times
 - Manage and clear incidents
 - Transit signal priority
 - Work zone scheduling
- Managing Demand
 - Drive less/save more
 - Individualized marketing



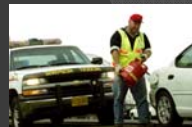
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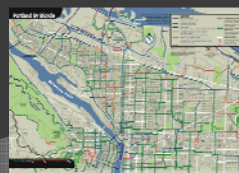
Enhance Transportation Safety for All Modes

- Operating Efficiently
 - Variable speeds
 - Automated enforcement (speed, red light cameras)
 - Coordinated response to incidents
 - Support emergency responder routing
 - Signal priority for EV and trucks
- Managing Demand
 - Provide safe introduction for transit, bike and walking
 - Highlight safer routes on bike and walking maps



Enhance Quality of Life

- Operating Efficiently
 - Manage incidents and detours to minimize congestion
 - Optimize traffic signals
 - Develop pricing strategies
- Managing Demand
 - Provide personalized transit information
 - Provide system information for bike and pedestrians.



Provide Comprehensive Multimodal Traveler Information

- Expand surveillance capabilities on arterials
- Provide near term traffic condition predictions
- Provide real-time information including:
 - Incident information
 - Detour routes
 - Transit
 - Multimodal trip planning
 - Parking facilities
 - Current pricing



Preliminary Selection Criteria

- | | |
|----------------------------------|-----------------------------|
| ○ travel time | ○ volume to capacity ratios |
| ○ reliable travel time | ○ bottlenecks |
| ○ ADT | ○ transit routes |
| ○ ADT Growth | ○ vehicle hours traveled |
| ○ freight route | ○ event generator |
| ○ VMT | ○ alternate route |
| ○ crash rate | ○ signal timing age |
| ○ transit ridership | ○ crash severity/type |
| ○ current access points per mile | ○ emissions |
| | ○ incident clearance times |

Transportation System Management and Operations (TSMO) Toolbox

March 11, 2009

Presentation to
TSMO Policy Work Group
Regional Travel Options Subcommittee
TransPORT Committee

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Presentation Outline

- Vision of TSMO Strategies
- TSMO Strategy
 - Grouping
 - Summary
 - Details
 - Examples
- Application of TSMO Toolbox
- Comments and Questions

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Vision of TSMO Strategies

- Implement multi-modal, cross-jurisdictional, and technology rich strategies
- Support Regional Travel Options
 - Enhance traveler information
 - Support parking management strategies
 - Support public-private partnerships
- Provide Strategies for 2035 RTP

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A Day in the Life of TSMO

- Before Work
- Traveling to Work
- Going for Lunch
- Traveling back Home



- How we can help:
 - Arterial and Freeway Data Management System (PORTAL)
 - Transit Traveler Information
 - Travel Options

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A Day in the Life of TSMO

- Before Work
- **Traveling to Work**
- Going for Lunch
- Traveling back Home



- How we can help:
 - Transit Signal Priority
 - Advanced Signal Operations and Detection System

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A Day in the Life of TSMO

- Before Work
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- **Going for Lunch**
- Traveling back Home



- How we can help:
 - Multimodal Traveler Information
 - Parking Management

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A Day in the Life of TSMO

- Before Work
- Traveling to Work
- Going for Lunch
- **Traveling back Home**



- How we can help:
 - Incident Management
 - Freeway Service Patrols
 - Active Traffic Management

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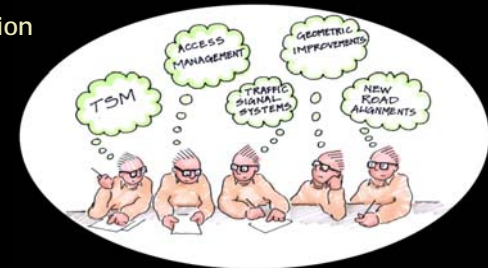


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TSMO Strategy Grouping

- A Arterial
- F Freeway
- AF Arterial / Freeway
- FR Freight
- T Transit
- TO Travel Option



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Example Summary of Toolbox

#	TSMO Strategy	Key Benefit(s)	Cost Range
A1	Access Management	↑ Mobility & Safety	Low
AF7	Active Traffic Management	↑ Mobility	Low-Med
F16	Incident Management	↑ Mobility & Safety	Low
FR32	Truck Signal Priority	↑ Mobility	Low
T35	Park and Ride Lots	↓ Congestion	Med-High
TO44	Bicycle Enhancements	↑ Mobility	Med-High

And many more...



Strategy Details

- Description
- Example Strategy Applications
- Potential Benefits
- Estimated Costs
- Influencing Factors
 - Political Factors
 - Institutional Factors
 - Technical Factors



Example Toolbox Strategies

- Arterial / Freeway:
Active Traffic Management
- Travel Option:
Bicycle Enhancements



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Arterial / Freeway: Active Traffic Management

- Description
- Operational strategies to improve traffic operations
 - To fully optimize the existing infrastructure
- Example
- Variable speed limits
 - Managed lanes
 - Advanced signal systems
- Benefits
- Increase throughput
 - Decrease crash rate
- Costs
- Varies, depending on strategies deployed

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Arterial / Freeway: Active Traffic Management

- Political
 - Improve operations of facility, rather than constructing new facilities
 - New cost model of investing in better operations rather than capital improvements
- Institutional
 - Coordination and compatibility across agencies
- Technical
 - Understanding new technology
 - Training
 - Risk/reward for "untested" technology

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Travel Options: Bicycle Enhancements

- Description
 - Techniques to improve bicycling safety and efficiency
- Example
 - Green wave
 - Wayfinding systems
 - Bicycle count locations
- Benefits
 - Reduced stops for cyclists
 - Positive reinforcement for cyclists
 - Innovative technique not used in the U.S.
- Costs
 - Varies, depending on choices

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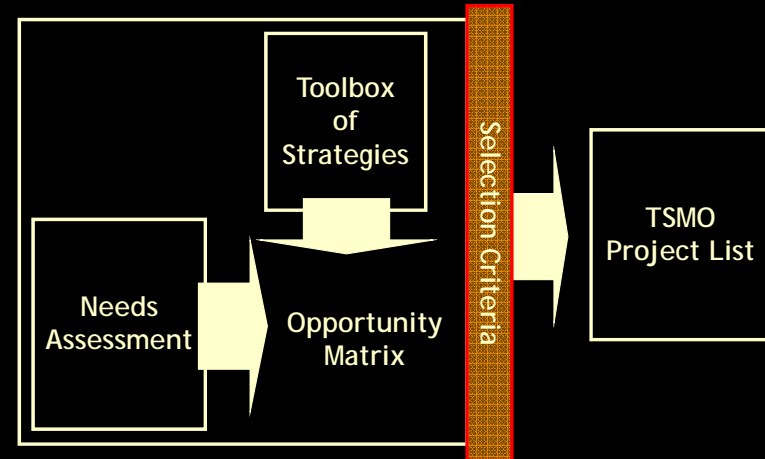
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Travel Options: Bicycle Enhancements

- Political
 - Potential complaints from drivers
 - Reduced air quality due to increase in vehicle stops
- Institutional
 - Revise cycle length, require coordination
 - Technical Factors
- Technical
 - Increased maintenance cost due to more vehicle braking activities

Application of TSMO Toolbox



TSMO Toolbox

- Welcome any feedback from the Group on:
 - TSMO Toolbox strategies & implementation
 - Toolbox link to regional needs
 - Narrowing Toolbox strategies for Portland Metro region (upcoming exercise!)

- Questions?

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