Successes and Lessons Learned...so far

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Congestion Pricing in Minnesota

- Opened 11 mile High Occupancy Toll (HOT) lane on I-394 in 2005
- Congestion pricing brand name: MnPASS
Congestion Pricing in Minnesota

• Opening new 16 mile HOT lane in two phases on I-35W as part of the Minnesota UPA project
  - 9 miles of HOT lanes opened in 2009
  - 3 miles of Priced Dynamic Shoulder Lanes in 2009
  - 4 miles of HOT lanes to open 2010, 2 miles in 2011
Minnesota UPA Project

- Combined $133 M in Federal funds, with $50.2 M in State Funds
- Funded 24 different projects and initiatives in four areas
  - Congestion Pricing (Tolling)
  - Transit
  - Telecommuting
  - Technology
- Major program focus is on I-35W, Hwy 77 and Downtown Minneapolis
35W UPA Project Summary

• Outcome: congestion free express lane from Burnsville Parkway to downtown Minneapolis, and commuter choices to avoid congestion

• Tolling implemented over three segments for 35W
  – Technology projects
    - includes technology/signing/striping changes
    - Includes managed lane technology over all lanes
  – Roadway projects
    • Resurfacing, interchange modifications, low cost capacity
    • Practical designs

• 35W UPA Project Budget: $65.7M
I-35W HOV to HOT Conversion
Segment 1: 9 miles

- Existing HOV Lane extended/converted to HOT Lane
  - Extend existing HOV through system interchange
  - Widen HOT lane to add buffer
  - Added tolling and lane management technology
  - Modified signing and striping
I-35W HOV to HOT Conversion
Segment 2: 4 miles

- HOT Lane currently under construction in 35W/Crosstown project
- HOT lane will open in 2010
Priced Dynamic Shoulder Lane (PDSL):
Segment 3: 3 miles

- Priced Dynamic Shoulder Lane North of 42nd St on NB 35W
- Maintains existing 4 lanes with an added PDSL Lane
- Effectively extends the MnPASS lane to downtown Minneapolis using existing road space
Innovative Use of Technology and Infrastructure

Managed Lanes
And Priced Dynamic Shoulder Lane (PDSL)
I-35W HOT Lane Signing

- **Car Pools, Buses, Motorcycles**
  - Access ¾ Mile

- **MnPASS Rate**
  - To Downtown

- **Car Pools, Buses, Motorcycles**
  - 6AM-10AM, 2PM-7PM Mon-Fri
I-35W MnPASS: Active Traffic Management
PDSL Closed
I-35W MnPASS: In Pavement Lighting
PDSL Closed
I-35W MnPASS: In Pavement Lighting
PDSL Open
I-35W MnPASS: In Pavement Lighting
PDSL Open
I-35W MnPASS: Active Traffic Management
I-35W Intelligent Lane Control Signals

- ILCS located every ½ mile over every lane.

- A total of about 174 ILCS will be installed by the end of 2010.

- ILCS are a 4ft x 5ft full color matrix signs.

- Use of the ILCS is primarily for incident management and speed harmonization.

- Designates when the priced dynamic shoulder lane is open or closed along with additional signing.
I-35W MnPASS: Active Traffic Management With Speed Harmonization

These overhead active traffic management signs will display speed limits, lane status, and MnPass messages so drivers know what’s happening ahead.
ILCS Structure Design
I-35W MnPASS: Active Traffic Management
## ILCS Sign Options

<table>
<thead>
<tr>
<th>Sign Option</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Blank – default</td>
<td>Blank – default</td>
</tr>
<tr>
<td>Green – Lane Open</td>
<td>Green – Lane Open</td>
</tr>
<tr>
<td>Flashing Yellow – Caution</td>
<td>Flashing Yellow – Caution</td>
</tr>
<tr>
<td>Red X – Closed</td>
<td>Red X – Closed</td>
</tr>
<tr>
<td>Yellow X – Closed Ahead</td>
<td>Yellow X – Closed Ahead</td>
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<tr>
<td>Merge</td>
<td>Merge</td>
</tr>
<tr>
<td>Speed Limit</td>
<td>Speed Limit</td>
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<tr>
<td>White Diamond</td>
<td>White Diamond</td>
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</tbody>
</table>
Hwy 13 Arterial Traffic Management System

- Fiber Optic Communications
- New Signal Controllers
- Detection
- 18 Cameras
- 6 DMS
- Completed Fall 2008
I-394 MnPASS Users Satisfied

- 91% overall satisfaction
- 95% satisfaction with all electronic tolling
- 85% satisfaction with traffic speed in lane
- 76% satisfaction with dynamic pricing
- 66% satisfaction with safety of merging
I-394 Corridor Operations Improve

- 4000 MnPASS customers per day; avg. toll $1.15
- I-394 MnPASS lanes peak hour volumes increased 9 to 33%
- Total I-394 peak hour roadway volumes increased by up to 5%
- 98% of time speeds above 50 mph
- Travel speeds in the general purpose lanes increased by 2 to 15 percent
- Transit ridership and carpools levels increase
- 45% reduction in crashes
I-35W MnPASS Early Results

- 1200-1500 MnPASS users per day
- 51% stay on I-35W north of I-494
- 49% exit at or before I-494
- 4500 new transponders holders in I-35W corridor
  • About 75 new-account holders sign up for 35W per week
- 1400 new transponder holders in I-394 corridor
- Substantially more on I-35W once Crosstown Commons area is complete
What’s Next for MnPASS Congestion Pricing?

• By 2010 all existing HOV lanes converted to HOT
• Seeking MnPASS expansion opportunities under several design concepts:
  – 2 miles extension of I-35W HOT lane in 2011
  – Implementing managed lanes and shoulders on I-94 in 2011
  – Studying MnPASS lane using movable barrier on major river crossing
  – More dynamic shoulders under consideration
• MnPASS Phase II Study prioritizing system expansion areas
Questions?

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