Eastside Corridor
Tolling Study

Executive Advisory Group
July 29, 2009

Washington State Department of Transportation
Welcome

Craig Stone
Director of WSDOT Toll Division
Agenda

- Introductions/Roles & Responsibilities
- Public Comment
- Meeting Goals
- Express Toll Lanes Video
- Traffic Performance
- HOV Performance and Funding
- History of Managed Lanes Studies
- Proposed Study Options
- Public Outreach Planning
Meeting Goals

1. Understand why we should consider implementing a managed lanes system for the Eastside Corridor

2. Confirm study options

3. Update on public outreach to date and confirm public outreach plan and materials
Range of Considerations

- Should we develop a managed lane system on the Eastside Corridor?
- What is the balance between congestion management and revenue generation?
- How should the system operate?
  - A one-lane system? Two-lane system? Or, a mix of the two?
  - Should the HOV designation be 2+ or 3+ or be phased from 2+ to 3+ as it becomes necessary?
- How should we implement the system?
How do express toll lanes work?

Express toll lanes to keep Washington moving

Eastside Corridor Tolling Video
Traffic Performance

Karl Westby
I-405 Team
How does traffic performance work?

Optimal Throughput: moving the most vehicles at rapid speeds

45-55 MPH

1800 Vehicles Moved
500 Vehicles Moved

1000 Vehicles Moved

1800 Vehicles Moved

700 Vehicles Moved
How does traffic performance work?
Why consider implementing express toll lanes?  
HOV Performance and Funding

Karl Westby  
I-405 Team

David Hull  
King County DOT

Dan Mathis  
FHWA
General Purpose Lane Performance
Effects of Congestion on Traffic Throughput

- We are currently operating at 45% – 60% efficiency during peaks.

- Currently, when efficiency is needed most vehicle throughput is the worst.

- Express toll lanes are designed and operated to be efficient all the time to keep traffic moving.

Lost throughput productivity due to congestion (WSDOT Measures, Markers and Mileposts – September 30, 2007)
HOV Lane Operational Challenges

- HOV lanes should operate at 45 mph 90% of the time.

I-405:
- Current HOV lanes are not meeting performance targets.

SR 167:
- HOV lanes currently have capacity.
- HOT lane pilot project underway.
Impact of HOV Congestion on Transit

Southbound
- 13 trips/hour
- 9 routes

Northbound
- 13 trips/hour
- 8 routes

Southbound
- 9 trips
- 7 routes

Southbound
- 9 trips/hour
- 6 routes
HOV/HOT Facilities from a Transit Perspective:

- Current facilities (2+) are unreliable and full
- The shift from 3+ to 2+ caused transit ridership to drop almost 15%
- We need to find a balance of operations

“The primary and interrelated goals of HOV facilities are to provide buses, carpools, and vanpools with travel time savings and more predictable travel times, and to thereby induce individuals to choose a higher occupancy mode over driving alone.” (TCRP Report 95)
National Funding

National Highway System (NHS)

- Eisenhower Interstate System
- Other NHS
Regional Funding
PSRC Transportation 2040

- PSRC is in the process of updating the regional transportation plan, Transportation 2040.

- A baseline alternative and five action alternatives are currently under consideration for the updated plan.

- Express toll lanes are consistent with Alternatives 1 and 2, and should be analyzed to better understand if they provide a cost-beneficial step towards the fully tolled facility in Alternatives 3, 4, & 5.

- Regional policy changes (such as HOV lane management) are being considered in Transportation 2040.
2+/3+ HOV Operations – How are they different?

**HOV 2+**
- HOV lane over capacity during peak
- HOV lane empty during off-peak
- HOV lane friction with general purpose lane

**HOV 3+**
- HOV lane empty during peak
- HOV lane empty during off-peak
- HOV lane friction with general purpose lane

![Graph showing HOV 2+ and 3+ operations over time]

- **Time (years)**
- **HOV Lane Speed (MPH)**
- 2009
- 3 + HOV
- 2 + HOV
Why Express Toll Lanes?

Challenges

- HOV Occupancy
- General purpose lanes perform poorly
- Transit is unable to guarantee reliable trips
- No new funding sources
- Idling vehicles stuck in traffic contribute to air pollution

Benefits of express toll lanes

- Manages demand and increases performance, providing a sustainable, reliable commute.
- Improves freeway operations and provides a reliable choice for all users.
- Provides infrastructure to enhance reliability of existing transit service and supports a BRT system in the future.
- Generates revenue that could help fund future planned corridor improvements.
- Keeping traffic moving with faster, more reliable trips helps improve air quality.
Previous Studies

Kim Henry
Eastside Corridor Project Director

Denise Cieri
Eastside Corridor Deputy Project Director

Washington State Department of Transportation
I-405 Managed Lanes Studies

- **2002**: I-405 Corridor EIS, I-405 Master Plan
- **2003**: Managed Lanes Technical Analysis
- **2006**: SR 520 to I-5 Express Toll Lane Investment Analysis
- **2007**: SR 520 to I-5 Draft Environmental Assessment Traffic Analysis
- **2008**: Financial Feasibility Technical Analysis (update to 2006 Analysis)
- **2009**: Eastside Corridor Tolling Study
2003 Managed Lanes Analysis

- Tolled lanes operate better than non-tolled lanes
- A two-lane system is better than a one-lane system

How would express toll lanes work corridor-wide?

2014 Morning and Afternoon Service at 3 Screenline locations - SR 527, Kirkland & Renton

Move more people, more vehicles, with less congestion
What have we learned?
2006 I-405 (SR 520 to I-5) Express Toll Lane Investment Analysis

- Even with the addition of an express toll lane, the HOV 2+ system only works until 2020
2007 I-405 (SR 520 to I-5) Draft Environmental Assessment Traffic Analysis

- Confirms that tolled lanes perform better than new general purpose lanes.
- Confirms that HOV 3+ is sustainable

Vehicles moving at 45 MPH or faster

| Current Lane Configuration | Build a General Purpose Lane | +10% | Build an Express Toll Lane | +70% |
2008 Feasibility Technical Analysis

- Revenue findings:
  - Less buy-in opportunity, so toll rates are higher.
  - Generates limited revenue.

- More buy-in opportunity, so rates are lower.
  - Greater revenue-generating potential.

- Study conclusion:
  - I-405 (SR 520 to I-5) project can be financed with either 2+ or 3+ because other funding sources are available.
  - Other projects will likely require additional funding sources.
Break
Proposed Study Options

Kim Henry
Eastside Corridor Project Director

Denise Cieri
Eastside Corridor Deputy Project Director
What have we studied?

<table>
<thead>
<tr>
<th></th>
<th>1 Lane HOV</th>
<th>2 Lane HOV</th>
<th>1 Lane TOL</th>
<th>2 Lane TOL</th>
<th>2 Lane TOL + GP*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
</tr>
<tr>
<td></td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
</tr>
<tr>
<td></td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
</tr>
<tr>
<td></td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
</tr>
<tr>
<td></td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
</tr>
<tr>
<td></td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
</tr>
<tr>
<td></td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
</tr>
<tr>
<td></td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
</tr>
<tr>
<td></td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
<td>3+</td>
<td>2+</td>
</tr>
</tbody>
</table>

* For SR 167, 1 lane tolled + GP
Study Option #1

- Primarily funded projects

I-405
- Two lane express toll lane system from SR 520 to SR 522
- One lane SR 522 to I-5

SR167
- Adds one southbound HOT lane from 8th Street E to S 277th Street (Stage 4)
Study Option #2

- Includes all elements in Study Option #1
- Converts HOV lane on I-405 from Renton to Bellevue to a one lane express toll lane, creating a 30-mile tolled system on I-405
Study Option #3

- Includes all elements in Study Option #2
- Adds a direct connector between I-405 and SR 167, creating a continuous 40+ mile Eastside Corridor system
Study Option #4

- Includes all elements in Study Option #3
- A second lane is built between Renton and Bellevue, allowing for a 20-mile two lane express toll lane system on I-405 from SR 167 to SR 522
- A northbound lane is built on SR 167 from 8th Street E to 15th Street SW (Stage 5)
- Creates a more robust 40+ mile Eastside Corridor system
Study Option #5

- Includes all elements in Study Option #4
- Adds a general purpose lane between Renton and Bellevue on I-405, building closer to the master plan
- Add a second express toll lane between SR 522 and I-5
- One HOT lane built on northbound and southbound SR167 between SR 512 and 8th Street E (stage 6)
- Creates a 50+ mile Eastside Corridor managed lane system
Proposed Study Options
Access Points
System Overview

Fully-functioning System

- Primarily, one lane on SR 167 that ties in with a two-lane system on I-405

- Balance of access points to maintain speeds and safety.

Eastside Corridor express toll lanes system with access points
Types of Access Points We’ve Considered

One HOT Lane

Direct Access

Two Express Toll Lanes—Entrance

Two Express Toll Lanes—Exit
Access Points: Fully-functioning System

I-405 North

I-405 South

SR 167

SR 167 HOT Lanes Pilot Project
Public Outreach Planning

Colleen Gants
I-405 Communications

Washington State Department of Transportation
Ongoing Outreach

We are here

2009

Interagency Working Group
Letter of Invitation: May 20
Meeting 1: June 4 Context/History
Meeting 2: July 23 Identify Key Scenarios
Meeting 3: Traffic & Revenue Model Results
Meeting 4: Phasing & Funding Principles

Executive Advisory Group
Letter of Invitation: May 20
Meeting 1: June 9 Context/History
Meeting 2: July 29 Identify Key Scenarios
Meeting 3: Traffic & Revenue Model Results
Meeting 4: Phasing & Funding Principles

Public Outreach
Community Briefings
June 19-21: Puyallup Meeker Days Festival
June 27-28: Bellevue Strawberry Festival
July 11: Kent Cornucopia Days
July 11-12: Mercer Island Summer Celebration
July 24-26: Renton River Days
August 15: Tukwila Days
August 30: Bothell River Fest
Focus Groups
Website and Online Comment Form
Web and Phone Survey

Reporting
Regular briefings to Transportation Commission
Submit Final Report to Governor & Legislature
What have we heard so far?

“WSDOT is considering adding up to two express toll lanes on I-405 that could connect with HOT lanes on SR 167, creating a 50+ mile corridor from Puyallup to Lynnwood. These new lanes would be in addition to existing general purpose lanes.”

Do you think this is a good idea? Why/why not?
Upcoming Outreach: August-September

★ Public Meetings:
- August 18 – Auburn
- August 19 – Bellevue
- August 20 – Renton

- Statistically valid phone survey
- Web survey
- Focus groups

▲ Ongoing summer festivals
- Community briefings
Public Meeting Advertising

- Direct mail postcards announcing open houses to households in the Eastside Corridor and individuals on the project mailing list
- Distribute postcards and flyers at summer events, libraries, community centers and city halls throughout the study area
- Send email notification to local WSDOT project email lists
- Display advertisements in local newspapers and online advertising
- Post meeting details on the Web
- Anything else?
Public Comment

We’re continuing to gather feedback on tolling options in the following ways:

- Email: ECTollingStudy@wsdot.wa.gov
- Web: www.wsdot.wa.gov/tolling/eastsidecorridor
- Comment forms at summer events and public meetings
- Mail to:

  I-405 Public Information
  600 108th Ave NE Suite 405
  Bellevue, WA 98104
Wrap-up/Next Steps

Craig Stone
Director of WSDOT Toll Division
Next Steps: Meeting 3

Meeting 1
Background/Context
June 2009

Meeting 2
Identify Scenarios, How Express Toll Lanes Work; System Performance
July 2009

Meeting 3
Traffic and Revenue Model Results
October 2009

Meeting 4
Funding & Phasing Principles
October/November 2009

Final Report
January 2010
Questions?

For more information please contact:

Denise Cieri, Eastside Corridor Deputy Project Director
CieriD@wsdot.wa.gov
425-456-8509

Meeting materials posted at:
www.wsdot.wa.gov/tolling/eastsidecorridor