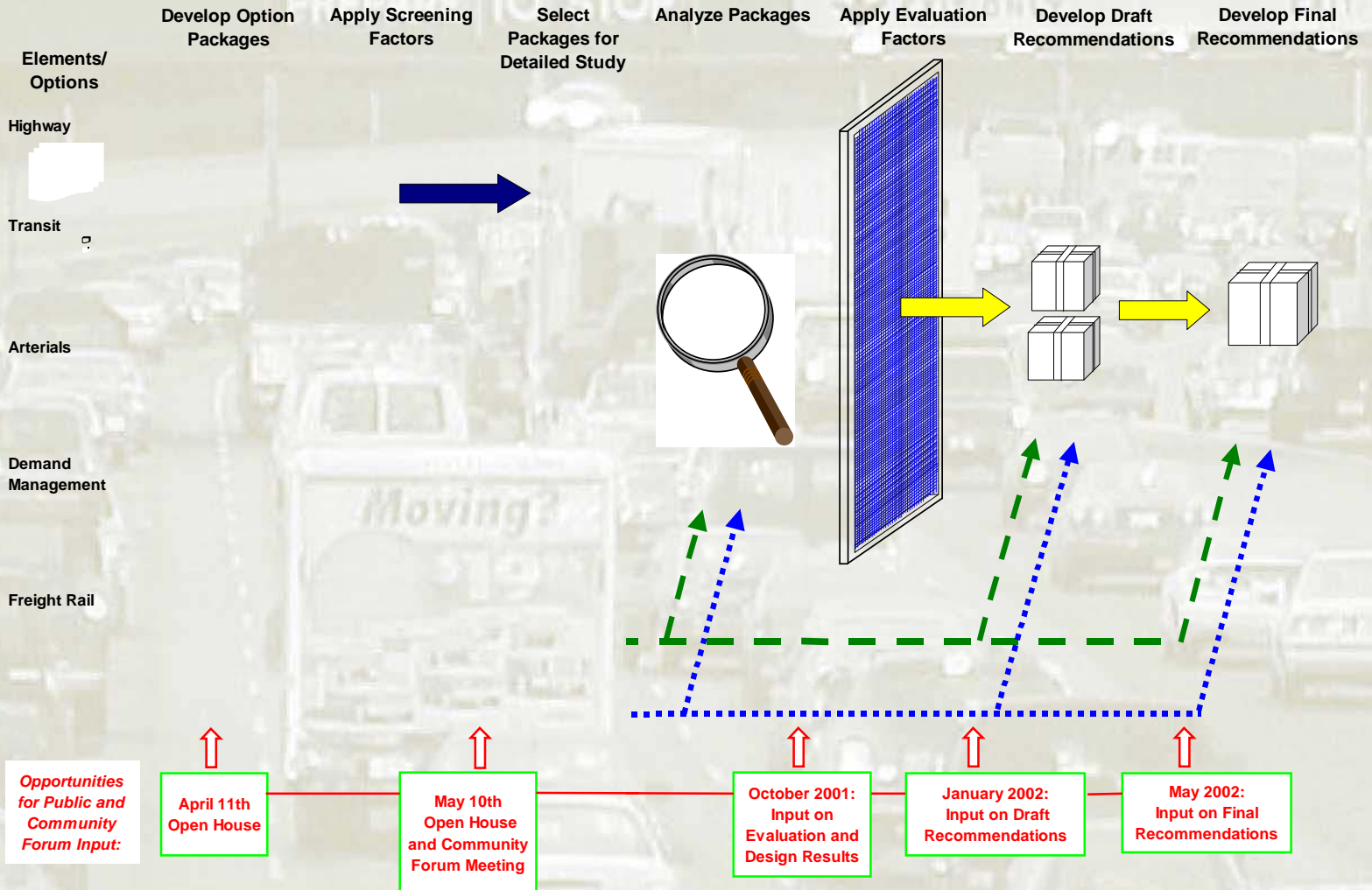
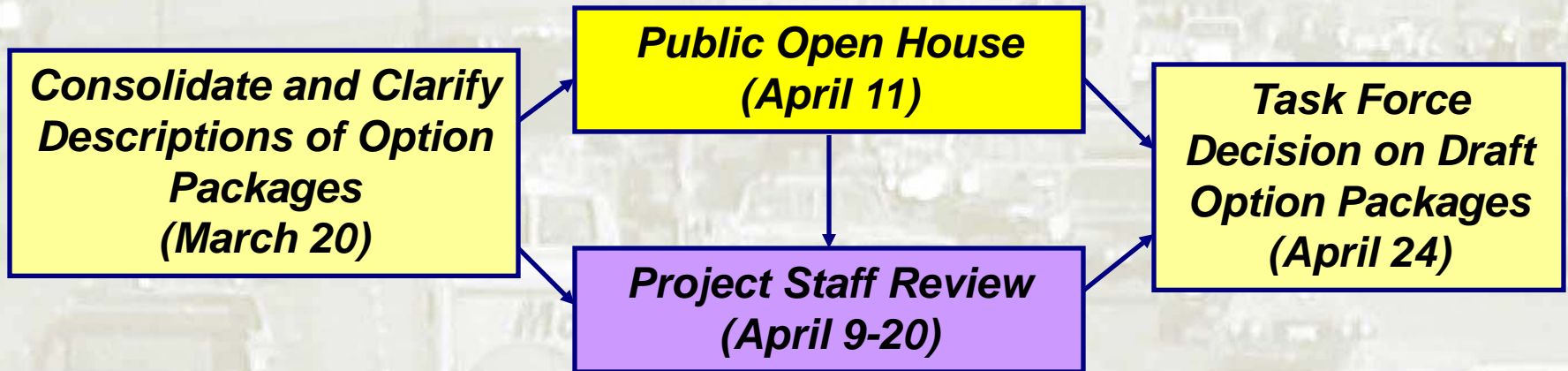


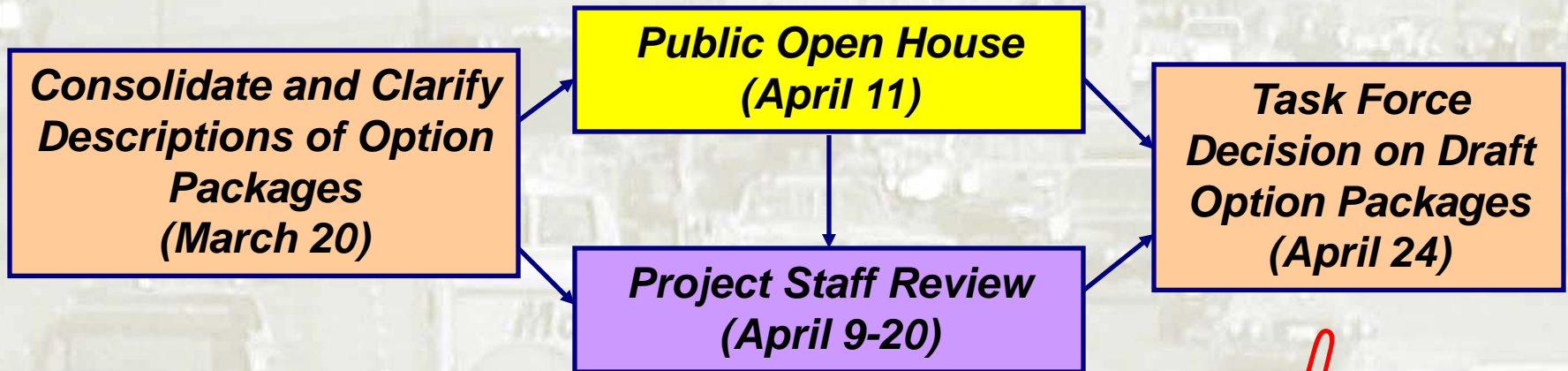
# Corridor Improvements Analysis Process



# Option Packages Steps, March - April



# Option Packages Steps, March - April



*You are here*

Highway

Transit

Arterials

Demand  
Management

SLIDE UNDER CONSTRUCTION

# Highway Options

- ***Address localized freeway issues only - no major corridor-wide capacity increase***
- ***Add a fourth lane in each direction throughout the corridor***
- ***Add a new corridor***

# Transit Options

- ***Transit service based on adopted regional transportation plans***
- ***Express Bus***
- ***Light Rail***
- ***Commuter Rail***
- ***Other: Personal Rapid Transit, Water Taxi, Helicopter, Jitney***

# Arterial Roads

***All Option Packages have a common set of improvements based on adopted regional transportation plans.***

***Arterial improvements in all packages include:***

- Widen Marine Drive to five lanes from T-6 to Portland Road***
- New four-lane bridge to Hayden Island from Marine Drive***
- Improve Columbia/Killingsworth intersection and connection to I-205***
- North Lombard overcrossing into Rivergate***
- New interchange at SR 500/St. Johns Blvd.***

# ***Demand Management***

***All Option Packages have a common set of demand management measures based on adopted regional plans.***

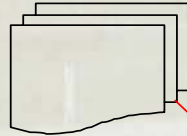
***Demand management measures in all packages include:***

- Increase funding for carpool and vanpool programs***
- Increase funding for employer outreach to encourage flex hours and telecommuting***
- Expand employer-sponsored transit passes***
- Increase mixed use development to reduce vehicle trips***
- Increase parking pricing and parking management***

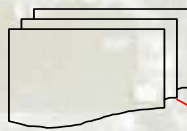


## Elements/ Options

Highway



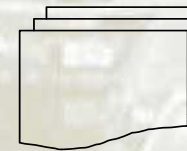
Transit



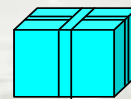
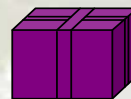
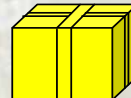
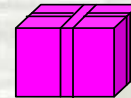
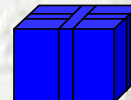
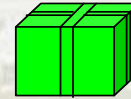
Arterials



Demand  
Management



## Option Packages



# Option Package Numbers

Transit	I-5 Freeway	
	No Major Freeway Capacity Increases	Major Freeway Capacity Increases
Planned Regional Transit Service	1	5
Express Bus	2	6
Light Rail	3	7
Commuter Rail	4	

**Option Package No. 8: New arterial road with Columbia River Crossing**

**Option Package No. 9: New Freeway Corridor**

## ***What About “Other Transit Options”?***

- ***Other transit options suggested through public outreach include personal rapid transit, water taxis, helicopters, jitneys.***
- ***Do not provide capacity to meet projected travel needs, or are unproven, and are therefore not specifically included in the Option Packages.***
- ***However, they could be added by future public or private action as supplemental service(s).***

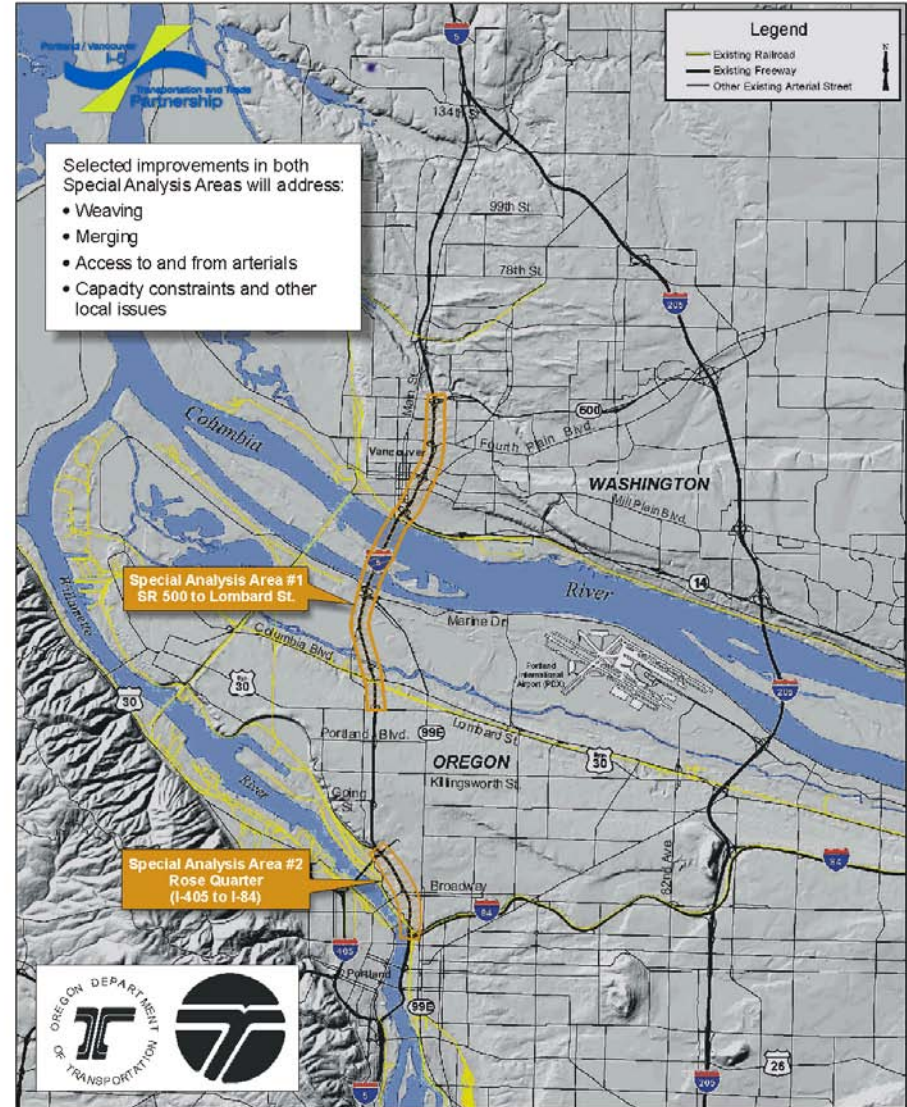
PREPARE TO

## Special Analysis Areas:

1) Lombard Street to  
SR 500

2) Rose Quarter

## Special Analysis Areas



# ***Special Analysis Areas (cont.)***

- ***Many inter-related problems***
- ***Areas with significant constraints***
- ***Wide range of possible solutions***
- ***Potential improvements considered concurrently with evaluation of Option Packages***

# *Special Analysis Areas (cont.)*

## *Potential improvements:*

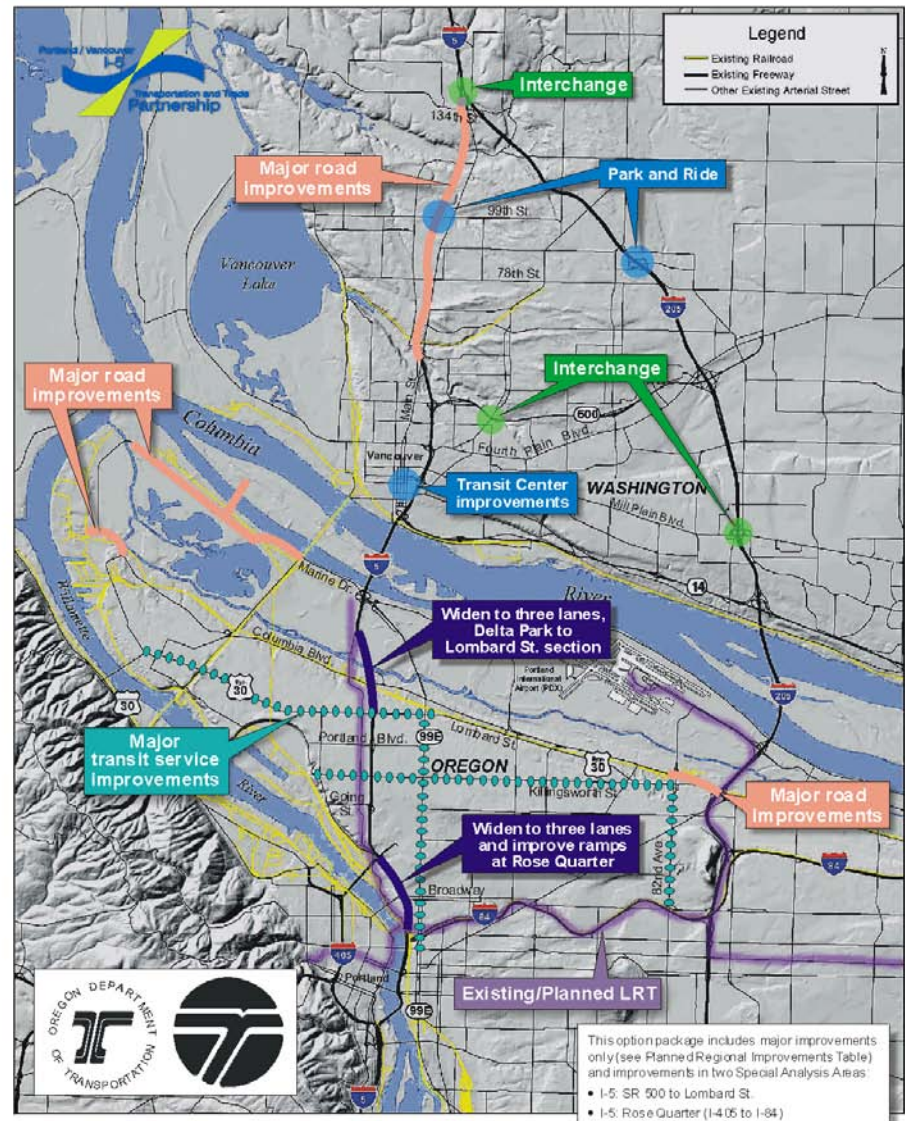
- *Arterial improvements*
- *Interchange reconfiguration (all interchanges will be studied)*
- *Freeway widening (from two to three lanes)*
- *New I-5 Columbia River crossing (Lombard - SR 500)*

PREPARE TO

# Option Package No. 1: Existing system plus planned improvements

Moving

## Option Package No. 1: Baseline 2020



PREPARE TO

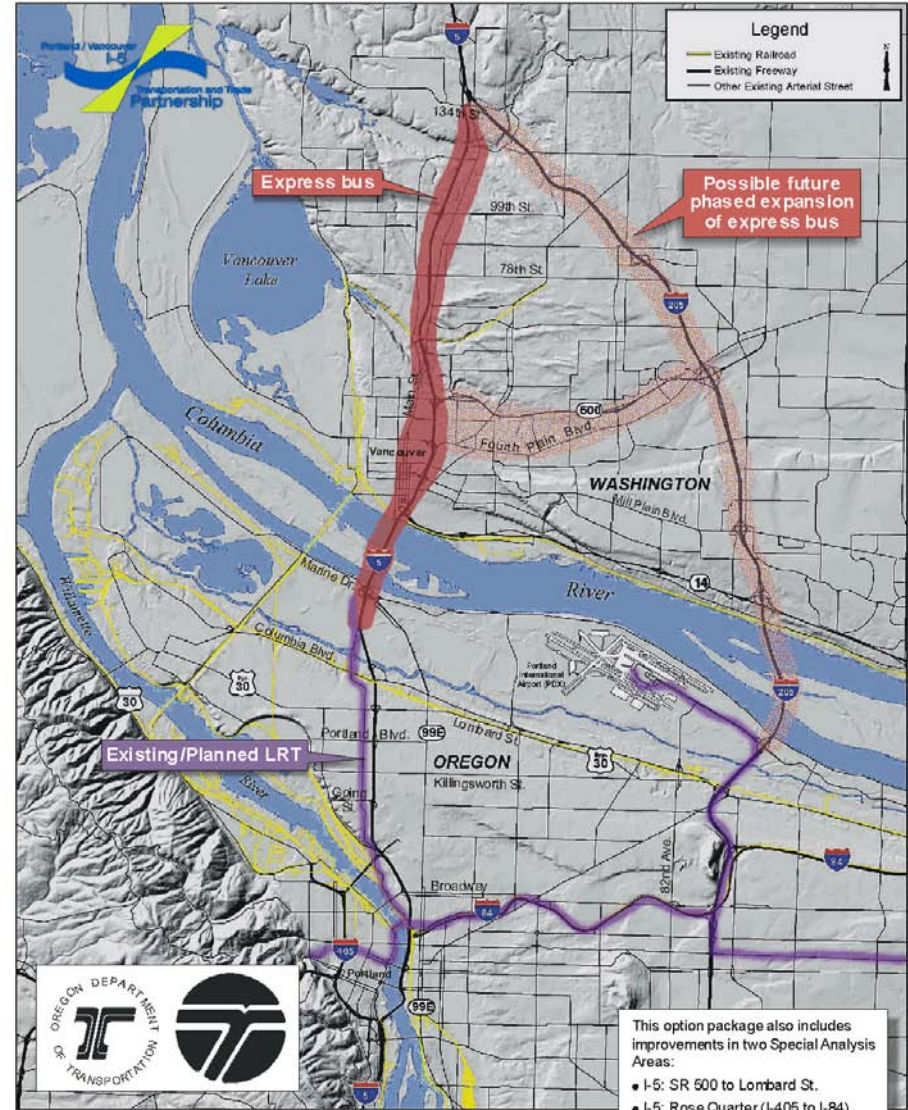
## Option Package No. 2:

### Transit: Express Bus

#### I-5:

- New Columbia R. bridge
- Potential improvements in Special Analysis Areas

## Option Package No. 2: Express bus without corridor-wide freeway capacity increase





PREPARE TO

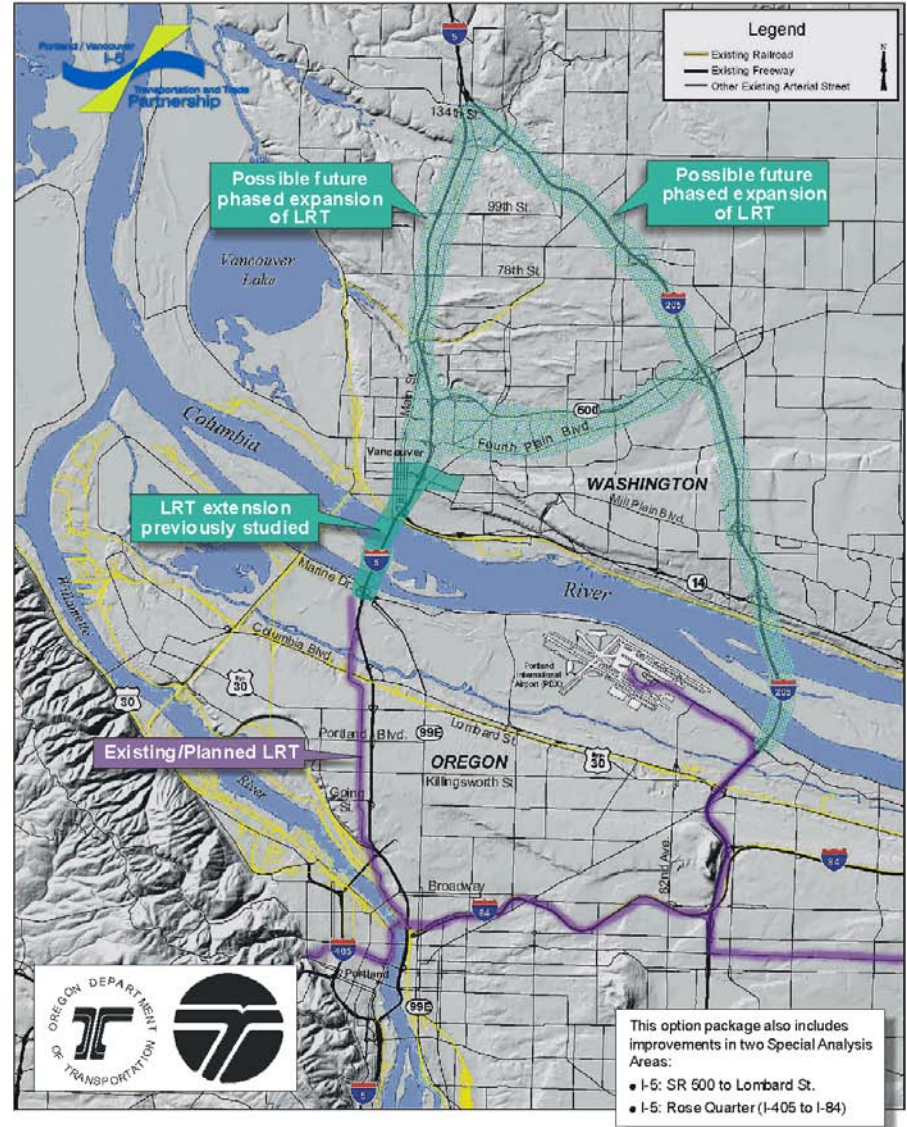
## Option Package No. 3:

Transit: *Light Rail*

I-5:

- *Potential improvements in Special Analysis Areas*

### Option Package No. 3: Light rail transit without corridor-wide freeway capacity increase



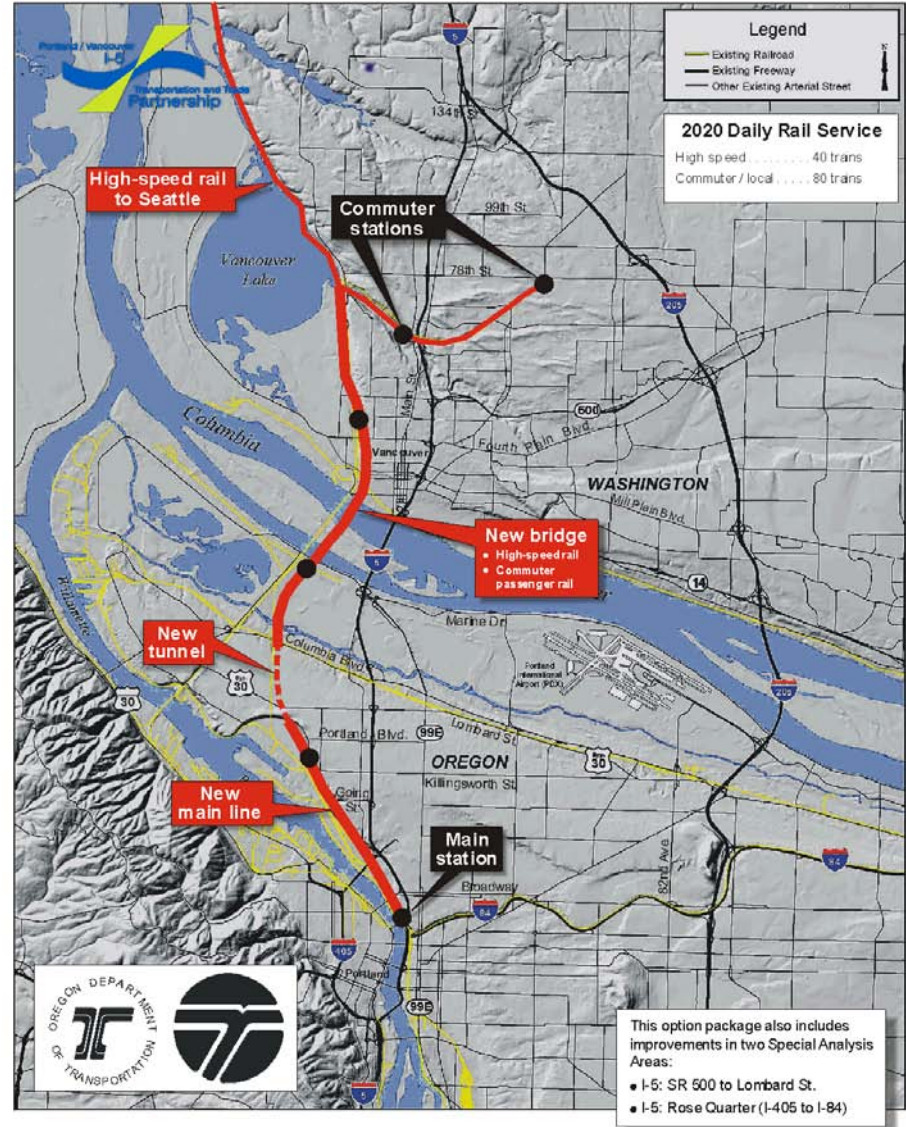
PREPARE TO

## Option Package No. 4:

**Transit: Commuter Rail**

**I-5:  
- Potential improvements  
in Special Analysis Areas**

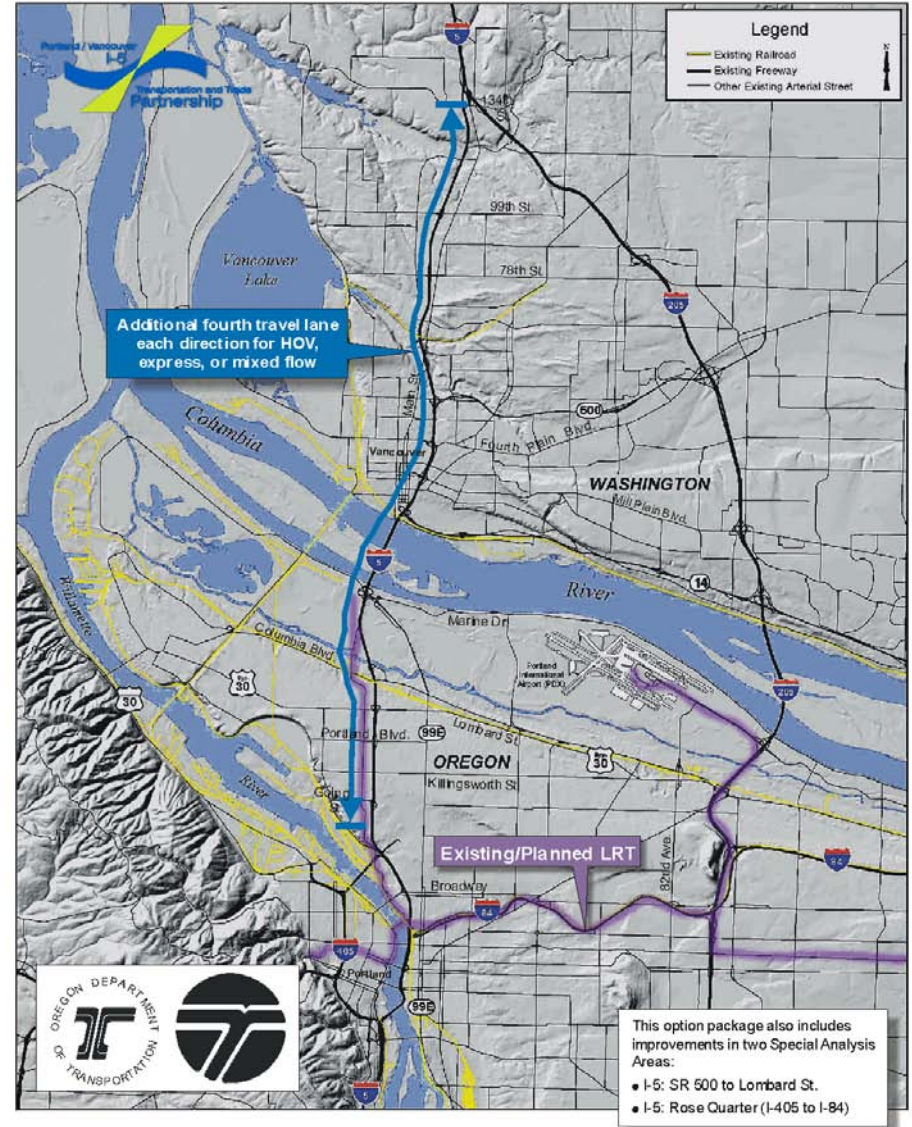
### Option Package No. 4: Commuter rail without corridor-wide freeway capacity increase



PREPARE TO

- Option Package No. 5:**
- Transit: Planned Regional Bus Service**
- I-5:**
- **New fourth lane each direction**
  - **Potential improvements in Special Analysis Areas**

**Option Package No. 5:  
Planned regional bus system with  
corridor-wide freeway capacity increase**



PREPARE TO

## Option Package No. 6:

### Transit: Express Bus

### I-5:

- New fourth lane each direction
- Potential improvements in Special Analysis Areas

Additional fourth travel lane each direction for HOV, express, or mixed flow

Express bus

Possible future phased expansion of express bus

Existing/Planned LRT



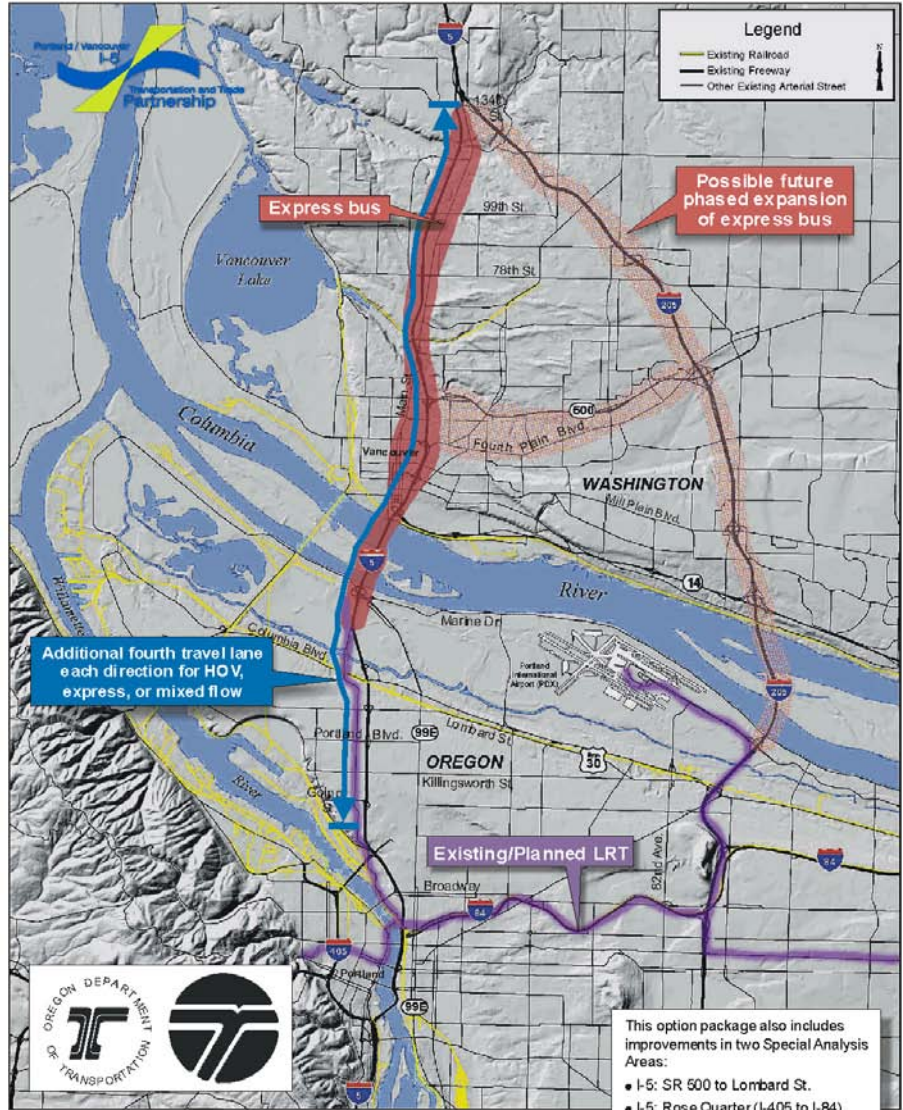
**Legend**

- Existing Railroad
- Existing Freeway
- Other Existing Arterial Street

This option package also includes improvements in two Special Analysis Areas:

- I-5: SR 500 to Lombard St.
- I-5: Rose Quarter (I-405 to I-84)

## Option Package No. 6: Express bus with corridor-wide freeway capacity increase



PREPARE TO

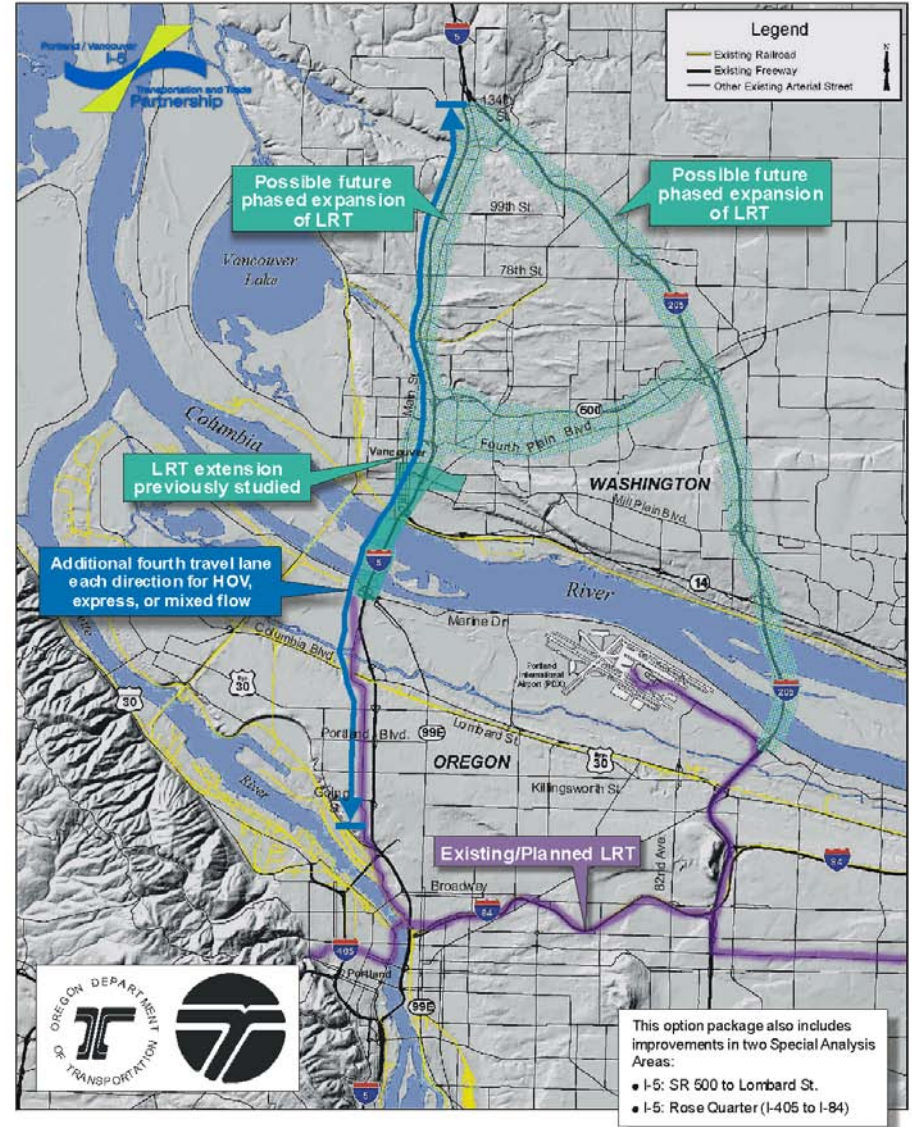
## Option Package No. 7:

### Transit: Light Rail

#### I-5:

- New fourth lane each direction
- Potential improvements in Special Analysis Areas

## Option Package No. 7: Light rail transit with corridor-wide freeway capacity increase



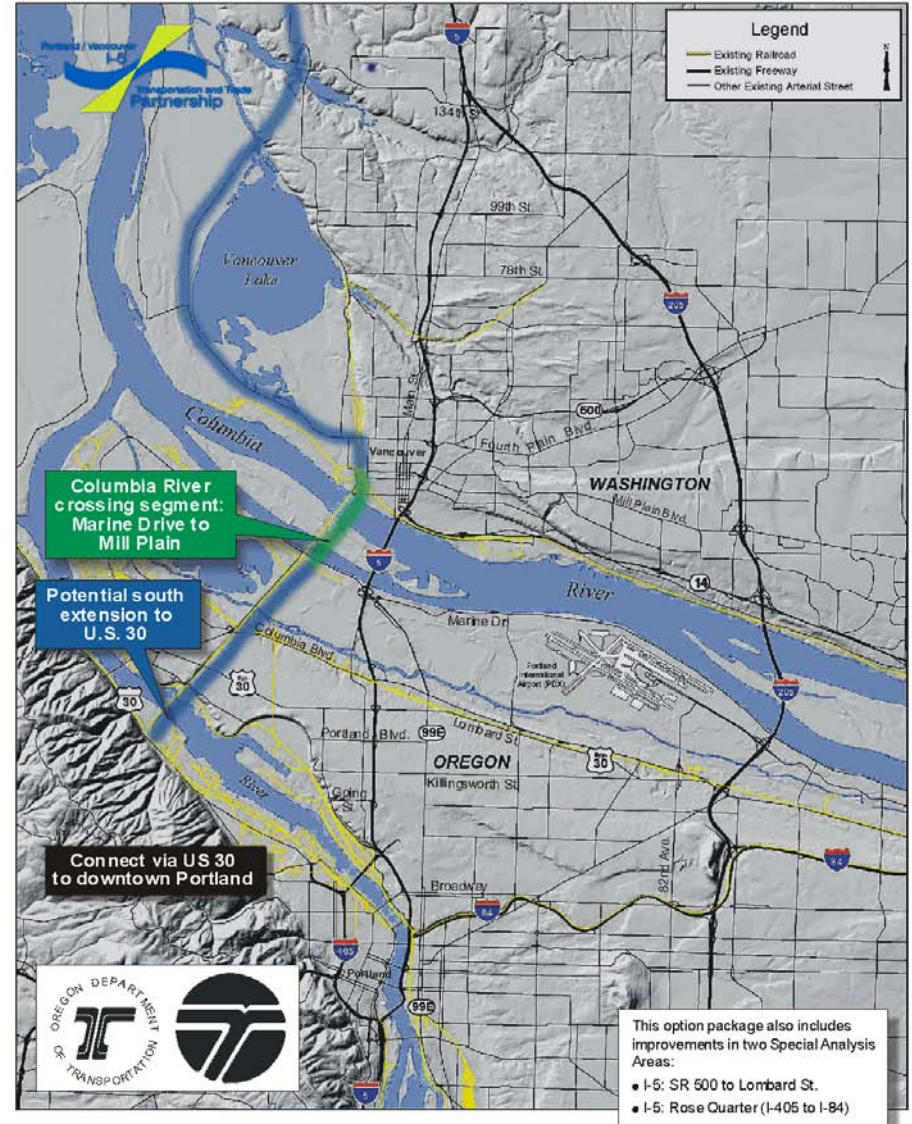
PREPARE TO

## Option Package No. 8: New Arterial Corridor

Transit: *Planned Regional  
Bus Service*

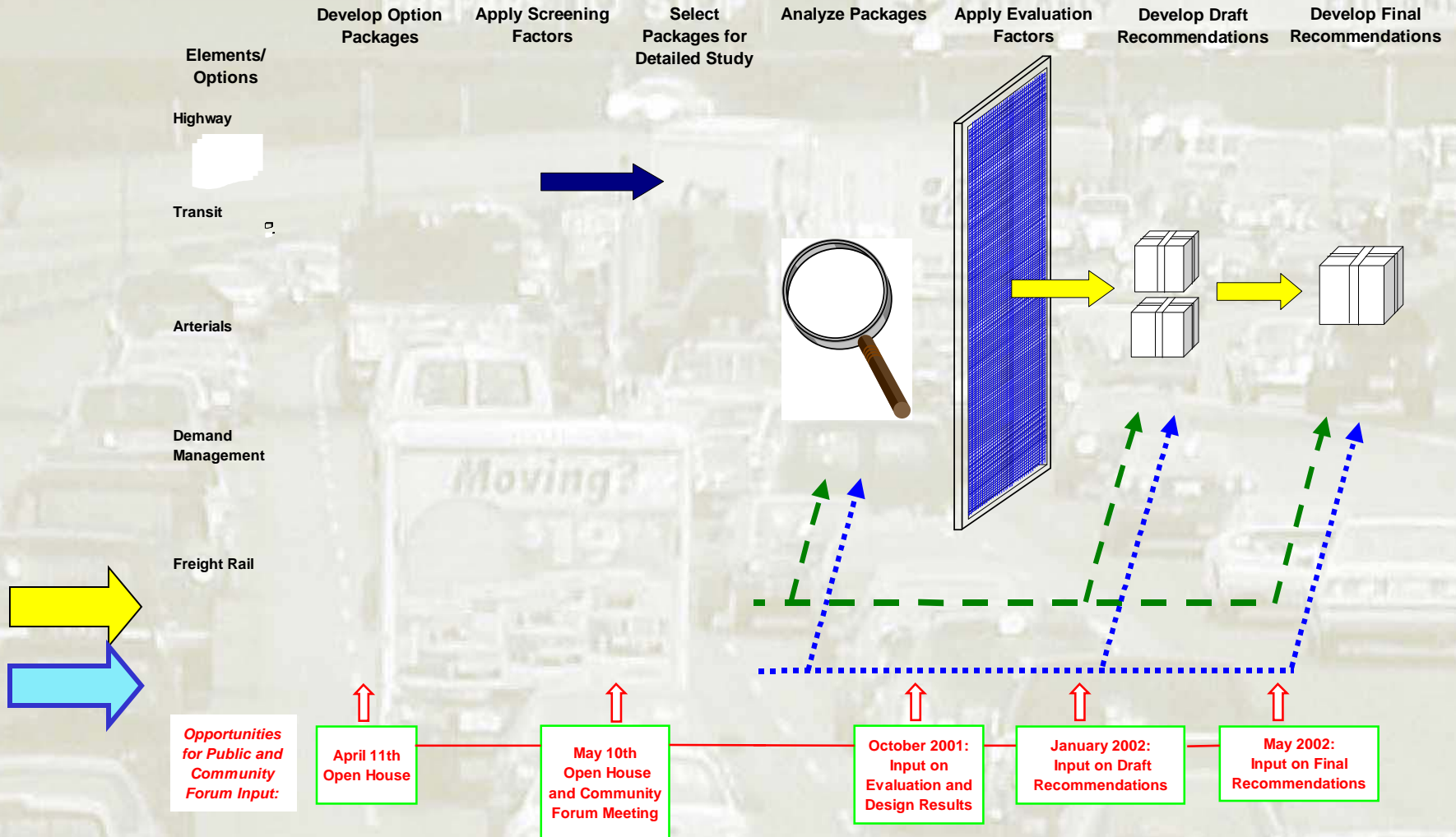
I-5:  
- *Potential improvements  
in Special Analysis Areas*

### Option Package No. 8: New arterial corridor / Columbia River crossing



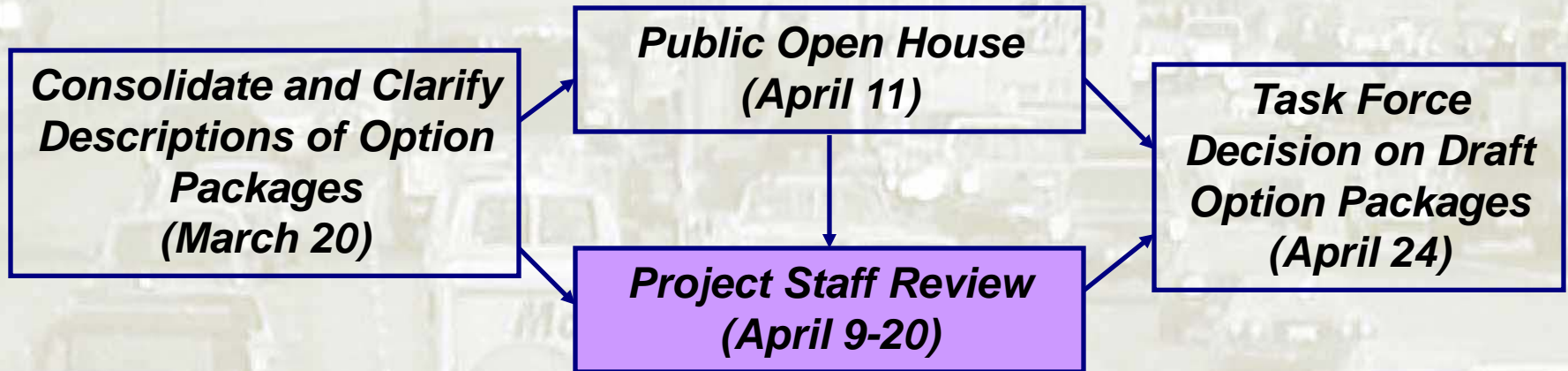


# Rail and Land Use Analyses Are Integrated Into Study





# Option Packages Steps



# ***Project Advisory Group Recommendations***

## ***Process:***

- ***Ranking by 20 specialists on evaluation measures***
- ***Separate ranking by Project Advisory Group***
- ***Consensus on Results***

## ***Project Advisory Group Recommendations (cont.)***

- ***Incorporates review by specialists in:***
  - ***land use***
  - ***transportation***
  - ***freight systems***
  - ***environmental planning and resources***
- ***Evaluation based on qualitative assessments of performance vis-à-vis the Evaluation Criteria***
  - ***professional judgment***
  - ***knowledge of the corridor***
  - ***previous studies (local and national)***

PREPARE TO

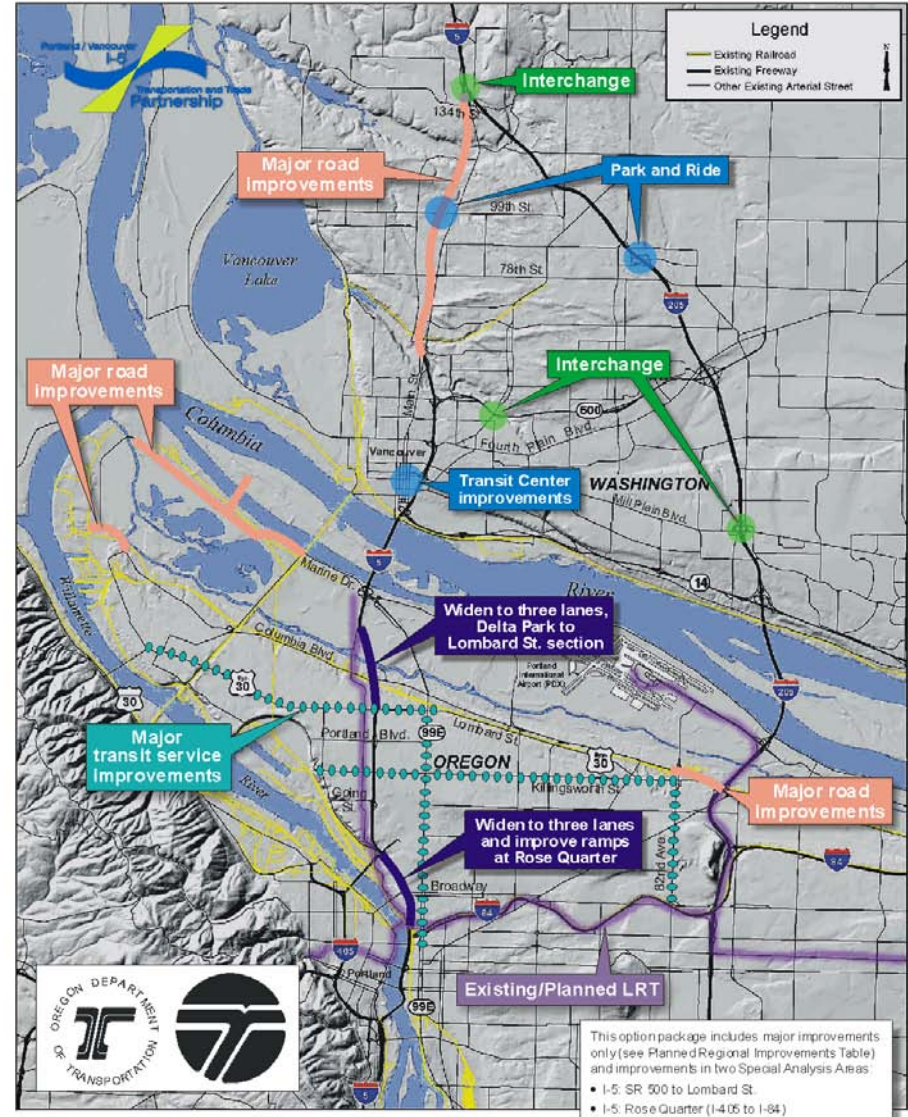
## Option Package No. 1:

**Recommendation:**  
**Study Further**

### Refinements/Clarifications:

- **Include Delta-Lombard widening to three lanes**
- **Include widening to three lanes at Rose Quarter**
- **Does not include new river crossing**

## Option Package No. 1: Baseline 2020



PREPARE TO

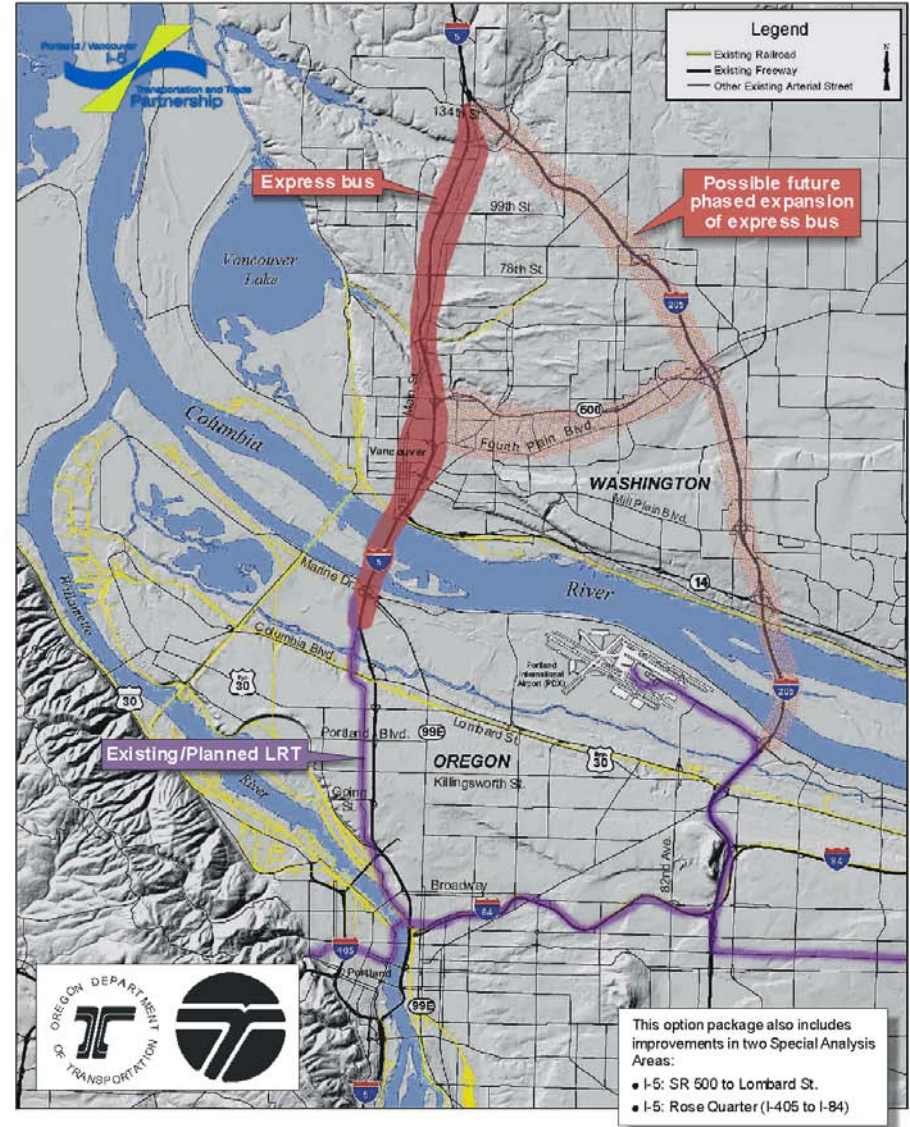
## Option Package No. 2:

**Recommendation:**  
**Study Further**

**Refinements/Clarifications:**

- **Include Vancouver - Hayden Island - Marine Dr. arterial connection**
- **Express bus connection to LRT at Expo Center**

## Option Package No. 2: Express bus without corridor-wide freeway capacity increase



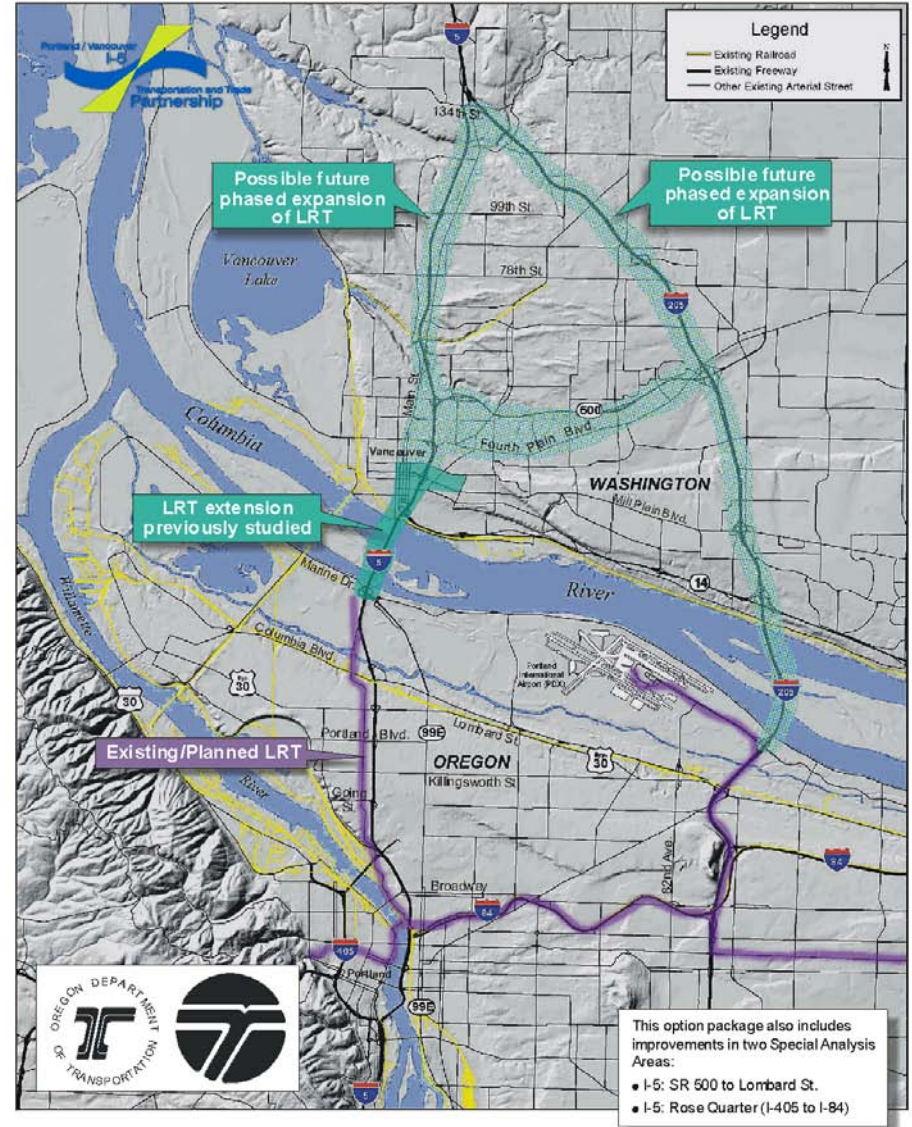
## Option Package No. 3:

**Recommendation:**  
**Study Further**

**Refinements/Clarifications:**

- Includes new LRT bridge
- New LRT bridge MAY include improved highway capacity.

## Option Package No. 3: Light rail transit without corridor-wide freeway capacity increase

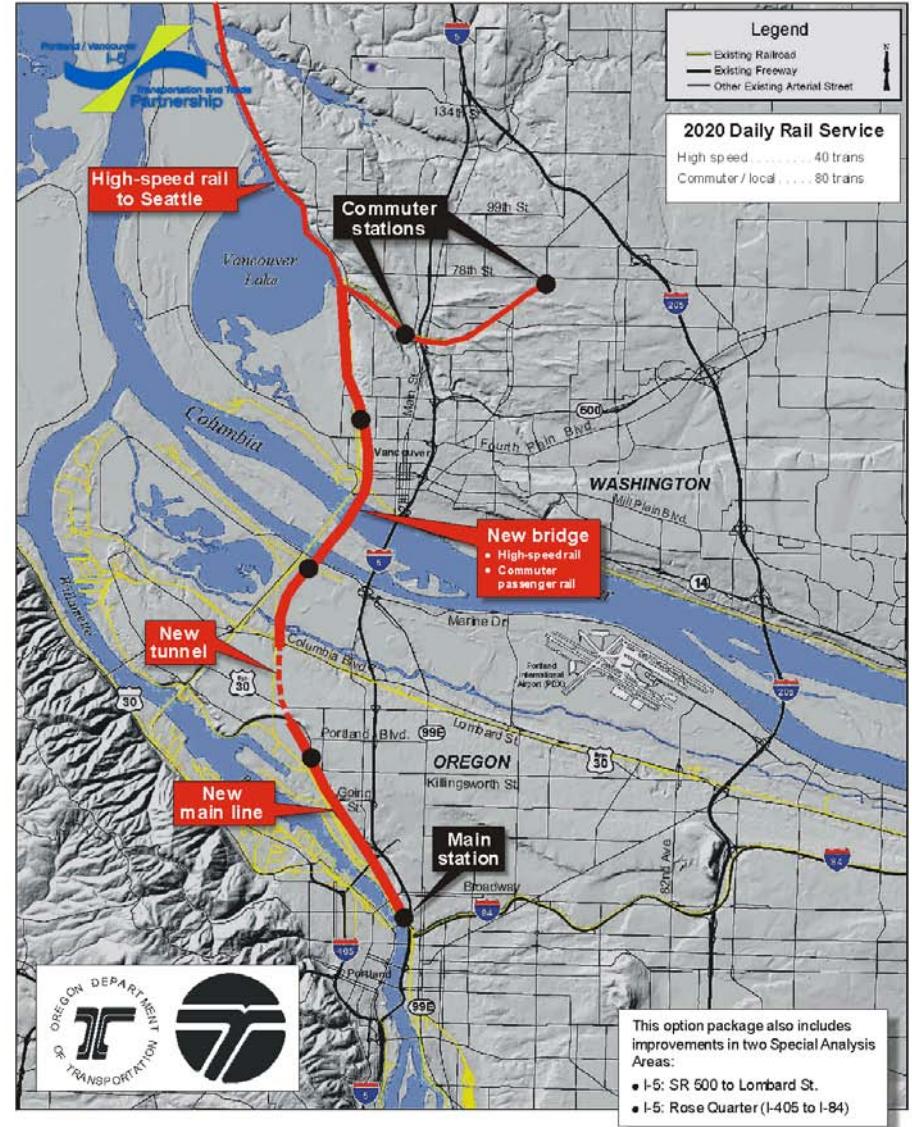


PREPARE TO

## Option Package No. 4:

**Recommendation:**  
**Defer further study until  
results from rail capacity  
analysis are available  
(Fall 2001)**

### Option Package No. 4: Commuter rail without corridor-wide freeway capacity increase

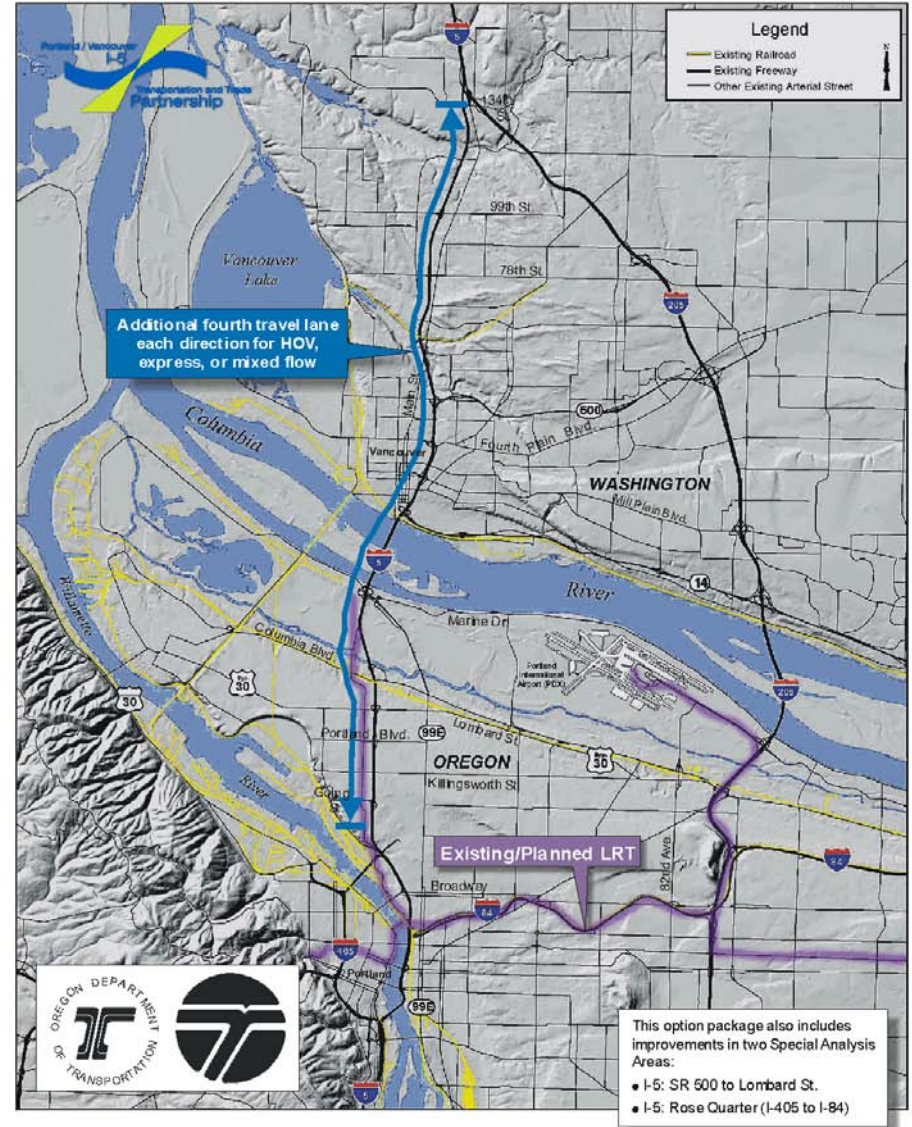


PREPARE TO

## Option Package No. 5:

**Recommendation:**  
**Do not study - consolidate  
as an option in Option  
Package No. 6**

### Option Package No. 5: Planned regional bus system with corridor-wide freeway capacity increase





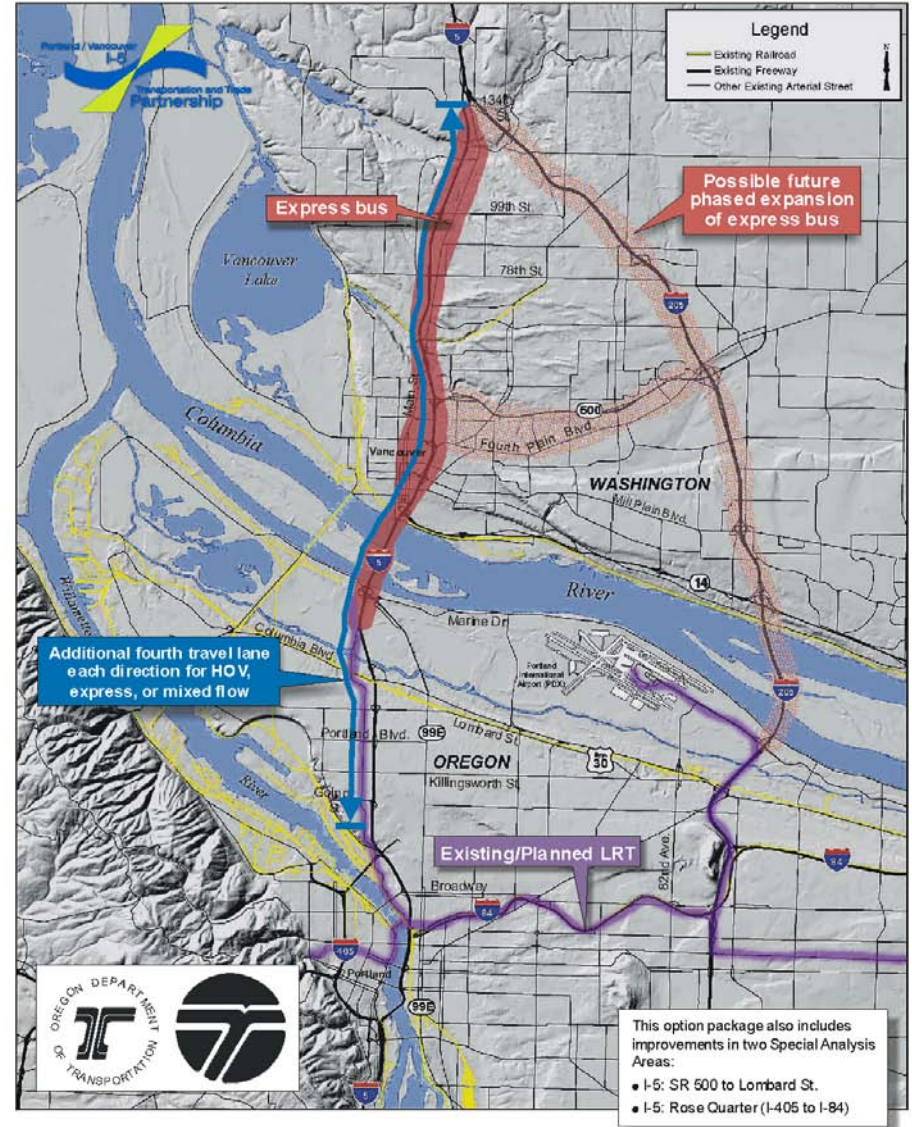
## Option Package No. 6:

**Recommendation:**  
**Study Further**

### Refinements/Clarifications:

- Express bus service from Clark Co. to downtown Portland
- Includes new I-5 Columbia River crossing
- Fourth I-5 lane for HOV, reversible express, or freight traffic

## Option Package No. 6: Express bus with corridor-wide freeway capacity increase



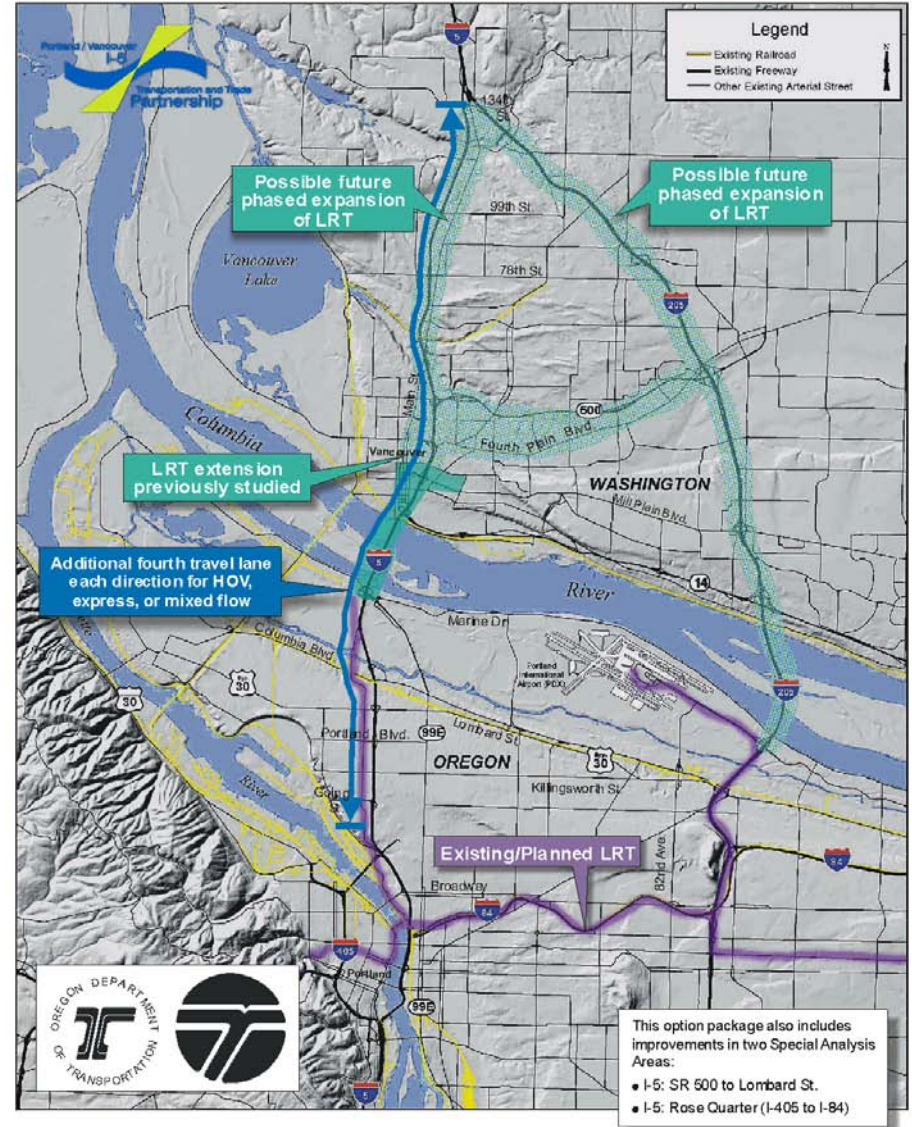
## Option Package No. 7:

**Recommendation:**  
**Study Further**

**Refinements/Clarifications:**

- Includes new I-5  
Columbia River crossing
- Fourth I-5 lane for HOV,  
reversible express or  
freight traffic

## Option Package No. 7: Light rail transit with corridor-wide freeway capacity increase



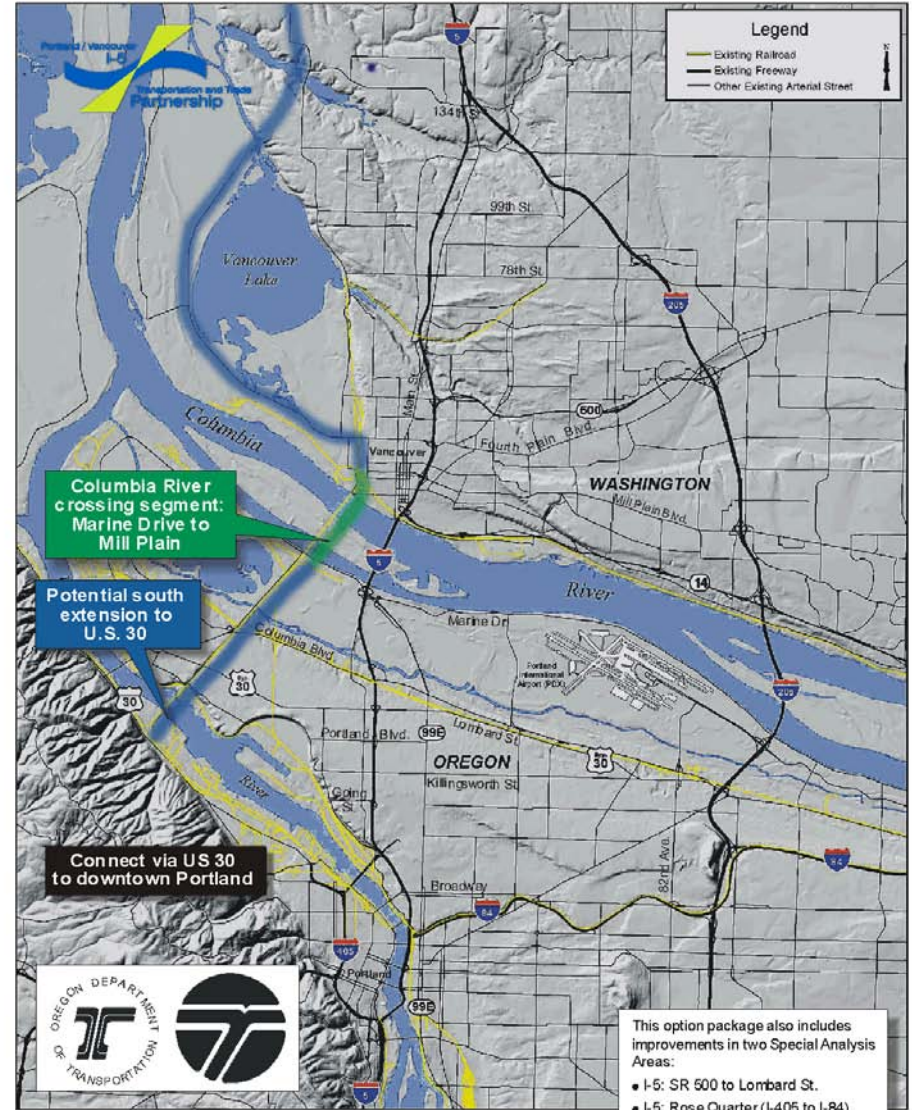
PREPARE TO

## Option Package No. 8: New Arterial Corridor

- Initial Option Package  
included extensions both  
north and south.

- Recommendation is ...

### Option Package No. 8: New arterial corridor / Columbia River crossing



## Option Package No. 8:

**Recommendation:**

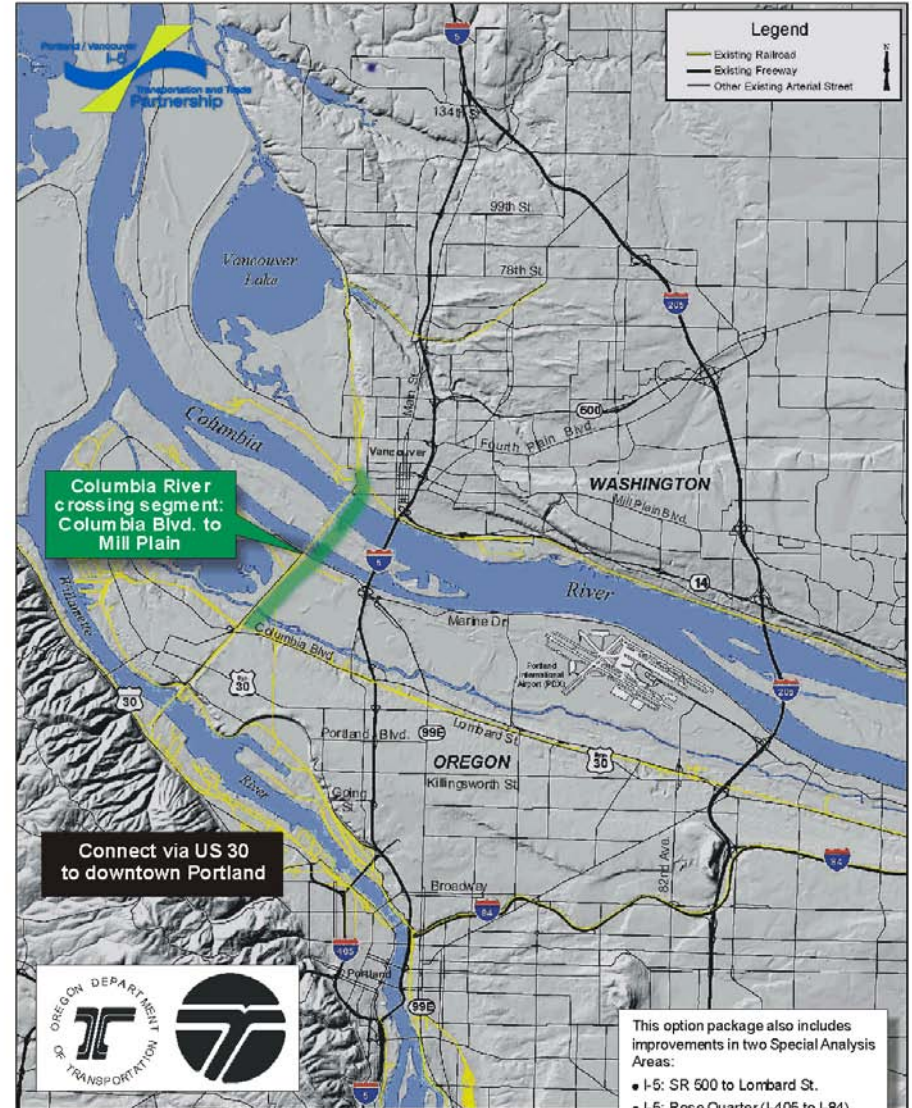
**Revise and Study Further**

**Refinements/Clarifications:**

**- Include only Mill Plain -  
Columbia Blvd. segment**

**Factors leading to  
recommendation include:**

## Option Package No. 8: New arterial corridor / Columbia River crossing



# ***Option Package No. 8: Key Factors Leading to Recommendation to Study Shortened Corridor***

- ***Mill Plain - Columbia Blvd. segment provides port and industrial access***
- ***Results from previous studies indicate south option would carry little traffic***
- ***North segment potentially has significant impacts to cultural and environmental sensitive resources***
- ***North and south options not included in current transportation plans for Vancouver or Portland***

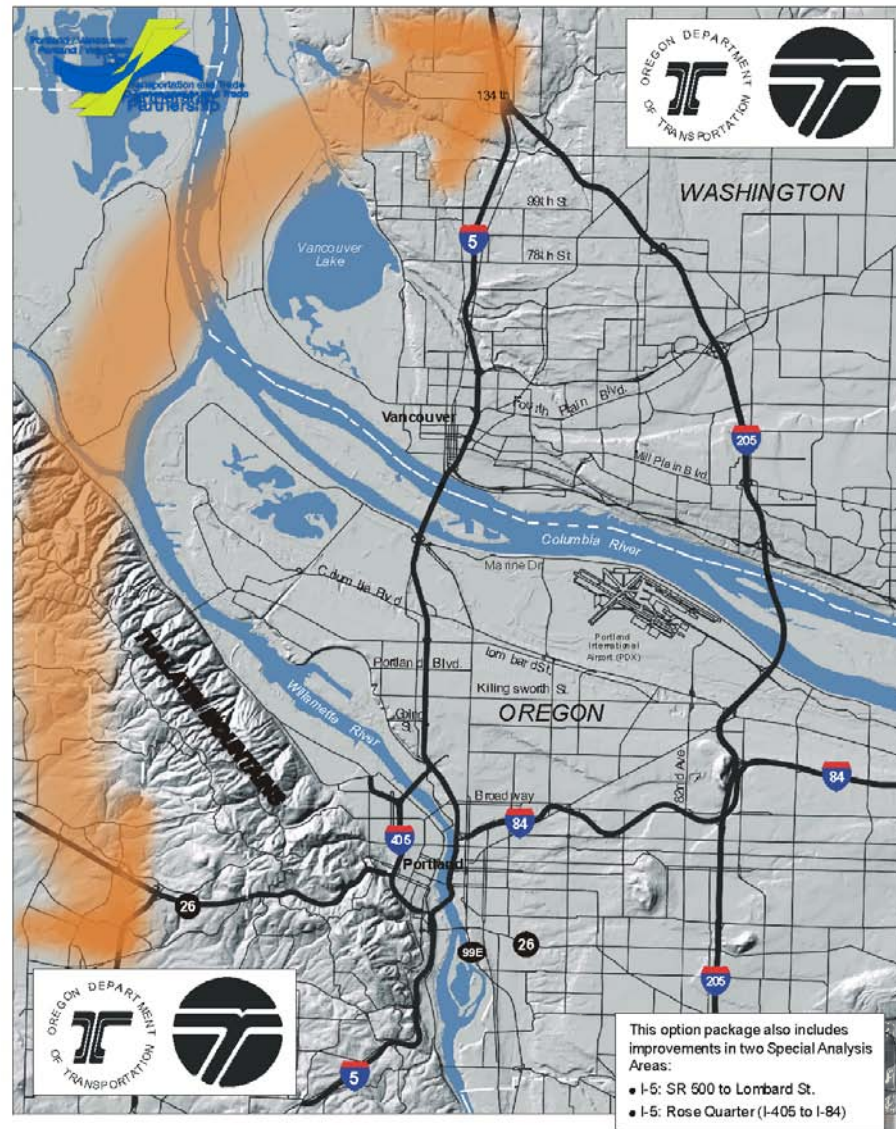
PREPARE TO

## Option Package No. 9:

**Recommendation:**  
**Do not study further**

**Factors leading to  
recommendation include:**

## Option Package No. 9: New freeway corridor

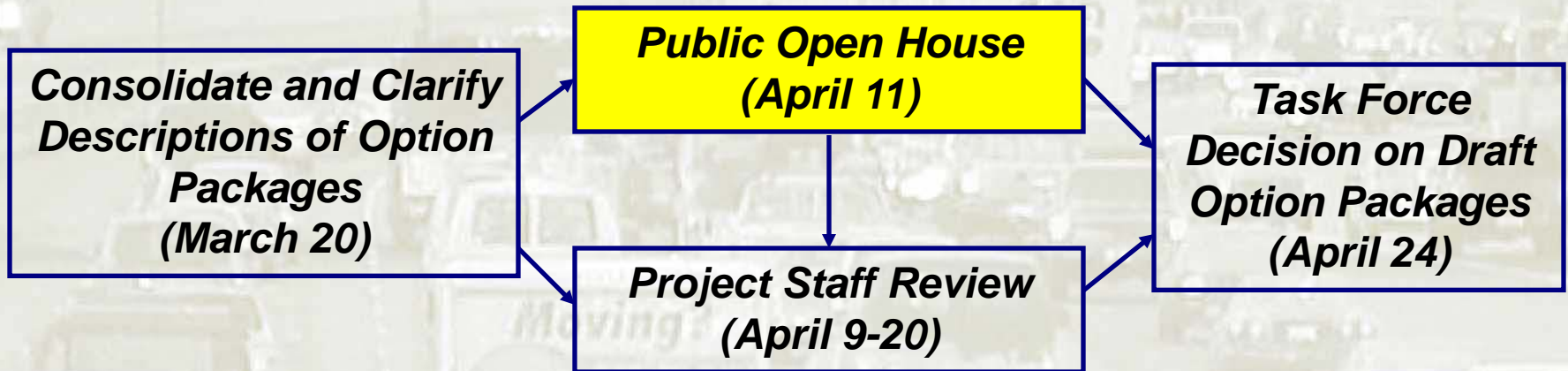


# ***Option Package No. 9: Key Factors Leading to Recommendation to Discontinue Further Study***

## ***Studied previously and ...***

- ***Would do little to address congestion in I-5 corridor (most trips in I-5 corridor start or end near I-5)***
- ***Very significant environmental impacts to Vancouver lowlands, Sauvie Island, Tualatin Mountains***
- ***Conflicts with local, regional, and state land use policies***

# Option Packages Steps





# *Open House Participation*

- Event held in Vancouver
- 165-plus participants
- 3/4th from Vancouver/Clark Co
- 1/4th from Portland

# *Transportation Elements*

- Freeway Elements
  - Even support:
    - just local improvements to freeway
    - 4th lane
    - new freeway corridor

## ***Transportation Elements - cont.***

- Transit Elements
  - High support for LRT and Commuter Rail
  - Support for express bus and planned service improvements
  - Low support for other transit service options including: jitneys, personal rapid transit. and helicopters

## ***Transportation Elements - cont.***

- Demand Management
  - Highly supported: employer outreach, employer sponsored transit passes, and mixed-use development
  - Supported: carpool and vanpool programs, and increased parking pricing and parking management
  - Additional comments supporting congestion pricing as a demand management tool

## *Transportation Elements - cont.*

- Freight Rail
  - Support for moving truck traffic to rail
- Land Use
  - Support for looking at land use alternatives
  - Encouraging jobs in Vancouver/Clark Co.

# Option Packages

Option #	Description	Study?
Option #1	Baseline 2020	Yes
Option #2	Express bus without corridor-wide freeway capacity increase	Yes
Option #3	Light rail transit without corridor-wide freeway capacity increase	Yes
Option #4	Commuter rail without corridor-wide freeway capacity increase	Mixed
Option #5	Planned regional bus system with corridor-wide freeway capacity increase	No
Option #6	Express bus with corridor-wide freeway capacity increase	Yes
Option #7	Light rail transit with corridor-wide freeway capacity increase	Yes
Option #8	New arterial corridor/Columbia River crossing	Study
Option #9	New freeway corridor	Mixed

## *Other Input About Packages*

- More extensive transit system in Clark County
- 4th Lane: very little support for a general purpose lane -- high degree of support for HOV or reversible lanes
- Support for a longer arterial road, extending south and north of the Columbia River

## ***Other Input About Packages - cont.***

- Support for adding a third lane to I-5 between Delta Park to Lombard
- Support for demand management
- Mixed support for 4th lane
- Mixed support for HOV lanes



# ***Additional Options***

- Combinations of existing options to:
  - Maximize capacity by combining freeway, arterial bridge and/or transit options, or
  - Maximize transit by combining several transit options.

## ***Additional Options - cont.***

- Alternate locations for a new corridor or for an arterial bridge
- Tolling of new facilities
- No-build alternative
- Emphasis on demand management and land use measures

# *Importance of Factors*

---

<b>Evaluation Factor</b>	<b># of Tokens</b>
Maintain or Enhance Quality Life	122
Maintain or Improve Transportation Performance	112
Minimize Impacts to the Environment	110
Support Freight and Goods Movement & Regional Economy	103
Support Regional Land Use Plans	70
Distribute Benefits, Costs, & Impacts Equitably	45
Evaluate Project Capital/Operation Costs	39

---

## ***Additional Evaluation Factors***

- Measuring the energy efficiency
- Analyzing the cost and benefit
- Analyzing the life cycle cost

# ***Open House Input and Staff Recommendations***

- Support for Delta Park Widening (Revised Option 1)
- Support for extension of express bus to downtown Portland (Revised Option 6)
- Support for using 4th lane at HOV or reversible express lane (Revised Options 6 and 7)

## ***Open House Input and Staff Recommendations - cont.***

- Support for a longer arterial connection than shown in Revised Option 8
- Divided support for commuter rail (Option 4)
- Divided support for new freeway corridor (Option 9)
- Divided support for 4th lane (Revised Options 6 & 7)

# Option Packages Steps



# Summary of Recommendations

<b>Package</b>	<b>Recommendation</b>
<b>1. Baseline (no new Columbia River Crossing)</b>	<b>Study further</b>
<b>2. Express Bus on New Arterial Bridge, Without Additional Freeway Corridor Capacity</b>	<b>Study further</b>
<b>3. Light Rail Without Additional Freeway Corridor Capacity (new LRT bridge)</b>	<b>Study further</b>
<b>4. Commuter Rail Without Additional Freeway Corridor Capacity</b>	<b>Defer further study until results from Rail Capacity Analysis are available</b>
<b>5. Planned Regional Bus With Additional Freeway Capacity</b>	<b>Do not study – refine as an option in Package</b>
<b>6. Express Bus to Downtown Portland With Corridor-Wide Freeway Capacity Increase (includes new Columbia River crossing)</b>	<b>Study further</b>
<b>7. Light Rail Transit With Corridor-Wide Freeway Capacity increase (includes new Columbia River Crossing)</b>	<b>Study further</b>
<b>8. New Arterial Road with Columbia River Crossing</b>	<b>Continue to study “port-to-port” bridge, Mill Plain to Columbia Boulevard.</b>
<b>9. New Freeway Corridor</b>	<b>Do not study</b>