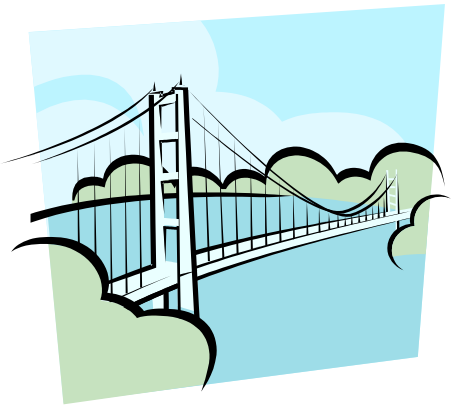
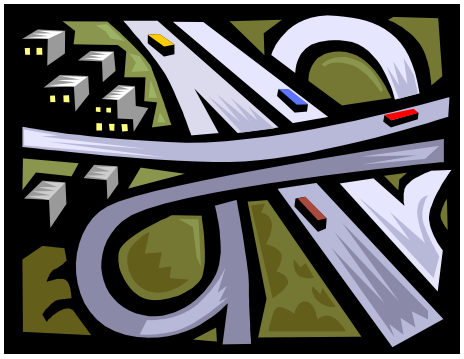
Bridge Influence Area

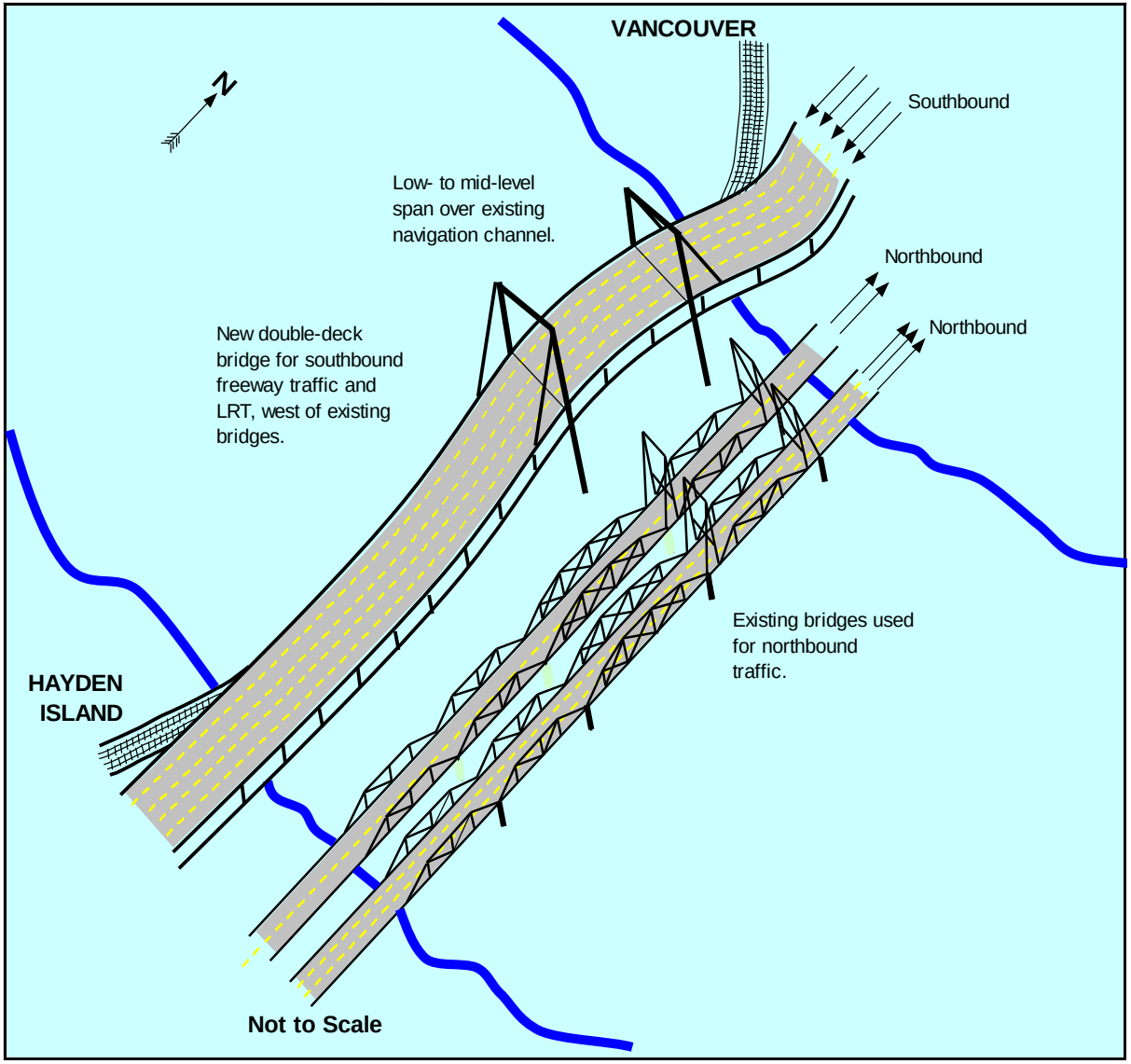
New Work on the Bridge and Bridge Influence Area

(SR 500 to Columbia Blvd)

- How can I-5 bridge and interchange improvements between SR 500 to Columbia Blvd. be designed to:
  - minimize disruption to neighborhoods and the environment,
  - address merging and safety problems, and
  - safely move traffic on and off the freeway?





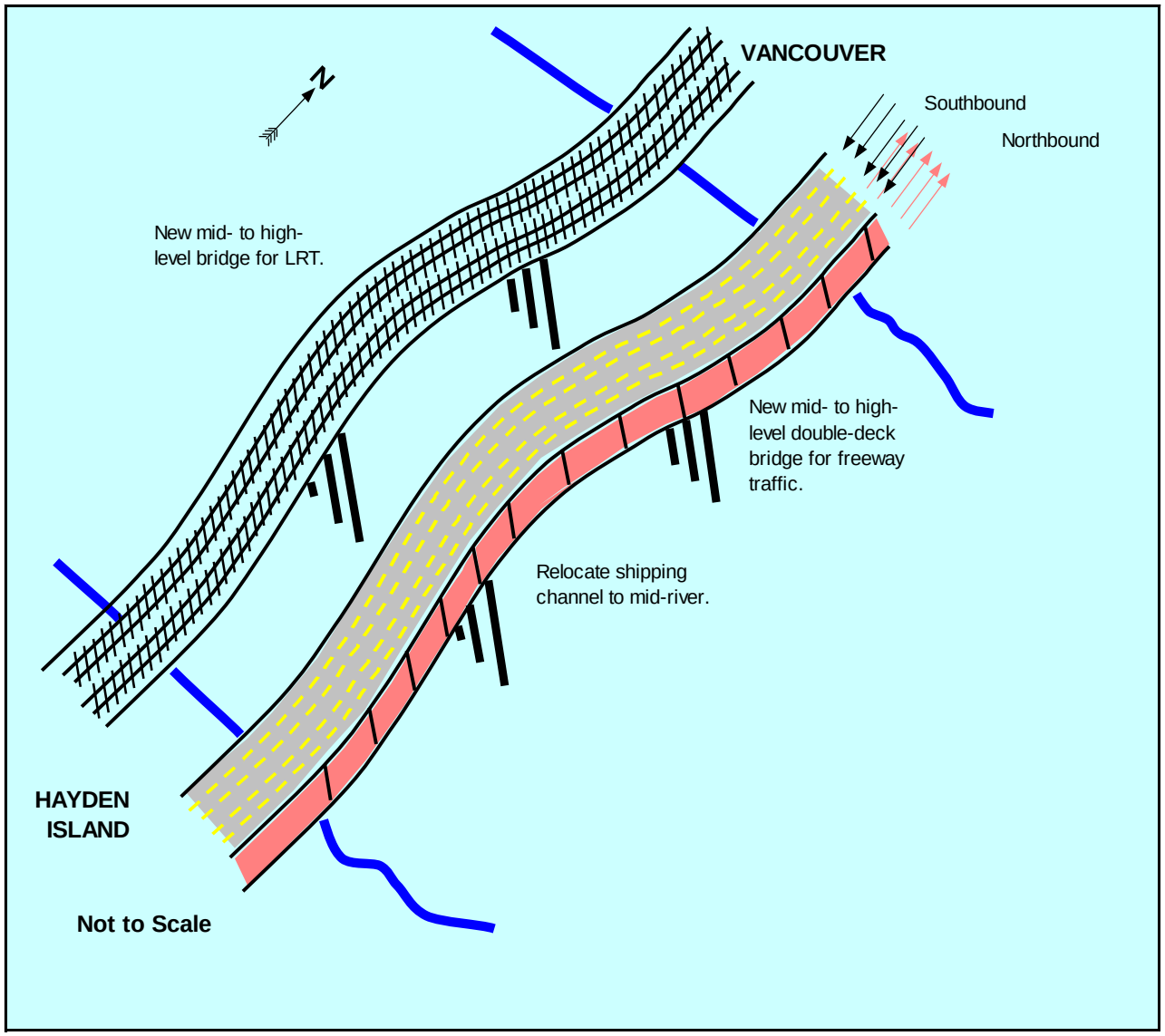


Concept 1:
5-lane southbound supplemental bridge for freeway traffic w/LRT

1. Southbound traffic on new five-lane bridge, LRT on lower deck -- west of existing bridges

2. Low- to mid-level bridge, with lift span over existing navigation channel

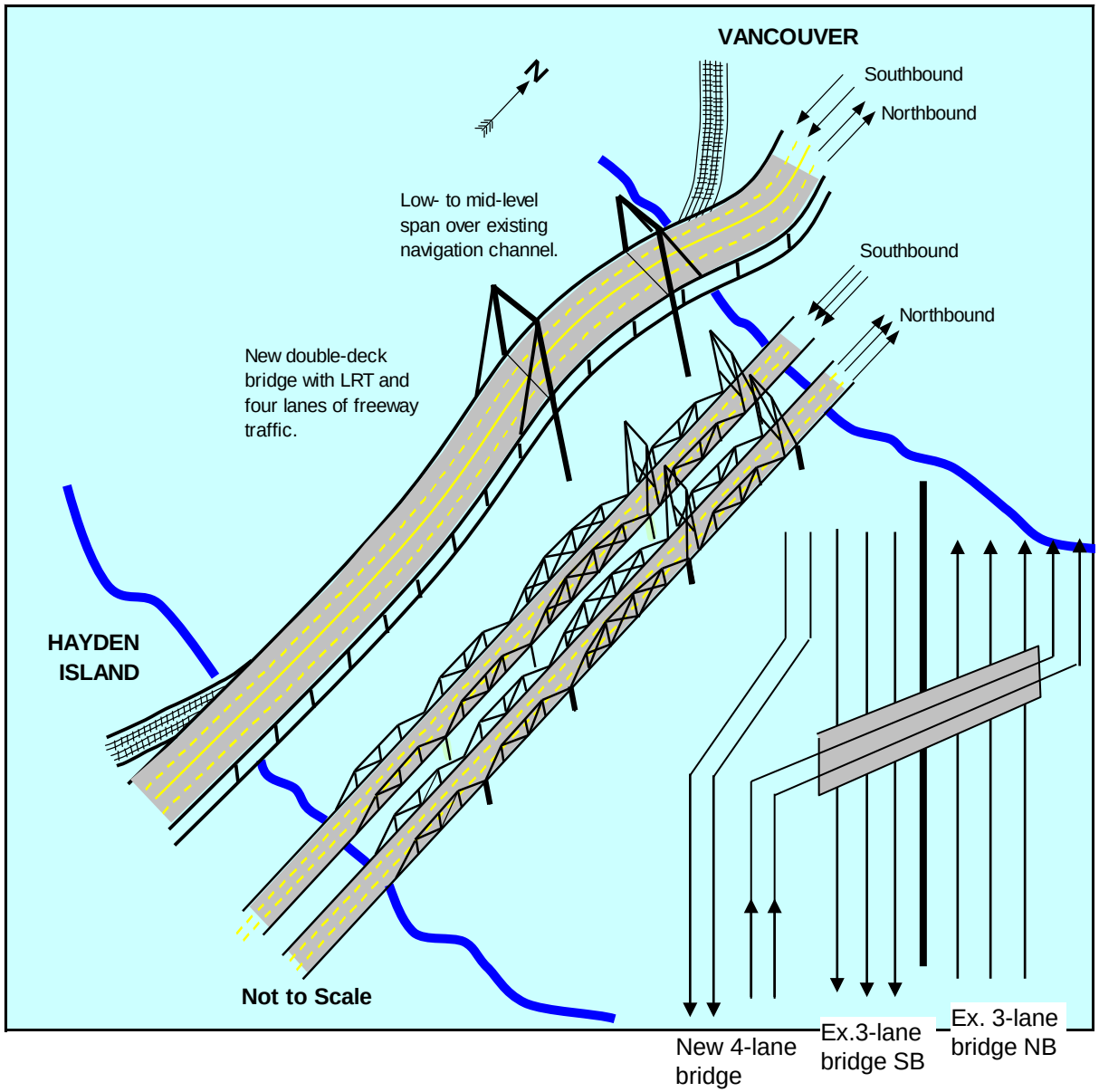
3. Northbound traffic would be split between the two existing bridges



Concept 4:
10-lane double deck, replacement bridge, plus LRT on separate new bridge

1. Mid- to high-level bridges. Navigation channel relocated to center of river

2. Potential fixed spans for highway and LRT (with Coast Guard reduction of existing lift requirements), or lift spans

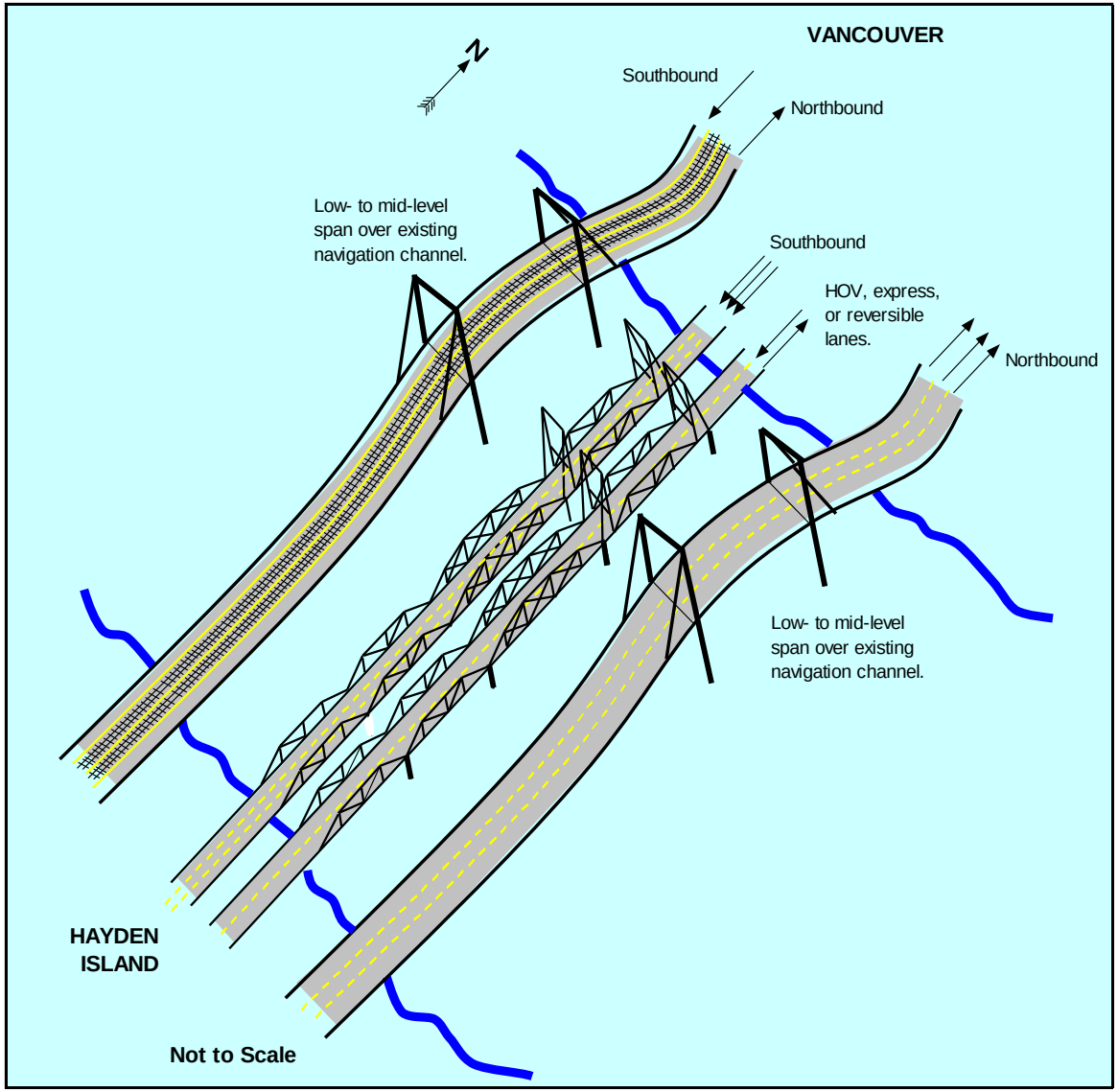


Concept 6:
4-lane supplemental collector-distributor bridge w/LRT, plus 6 lane freeway

1. Provides for new four-lane bridge with LRT west of the existing bridges

2. Low- to mid-level bridge with lift span over current navigation channel

3. Use four-lane bridge as collector-distributor (i.e., ramp access for Hayden Island, etc.). Requires fly-over ramps north and south, as shown in the schematic on the left



Concept 7:
8-lane freeway concept plus new LRT bridge with two-lane arterial

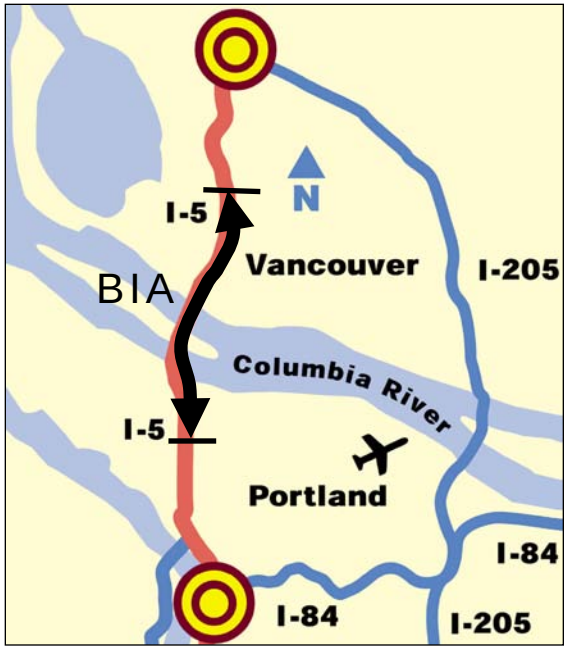
1. Provides for new four-lane bridge with LRT

2. Low- to mid-level bridges with lift spans over current navigation channel

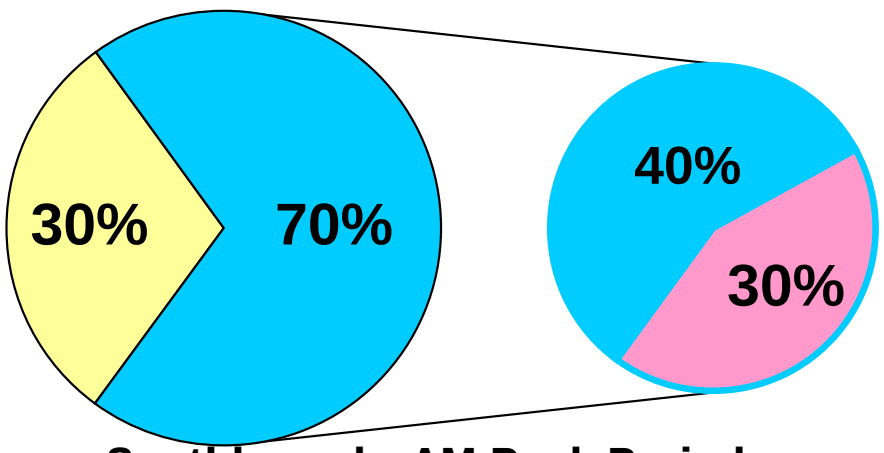
3. Two lanes on existing northbound bridge could be used for HOV, express lanes, or (potentially) reversible lanes

I-5 Columbia River Bridge Traffic

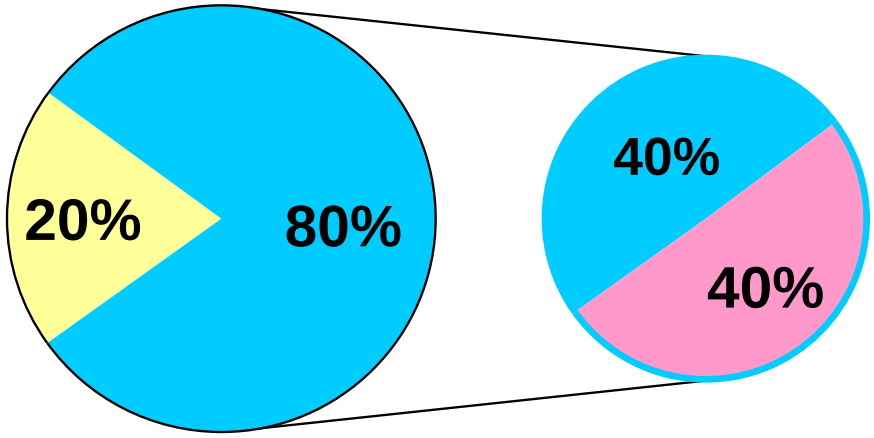
2020 Through Trips vs. Bridge Influence Area Trips



- Through Trips
- Enters or Exits I-5 Within the BIA
- Enters and Exits I-5 Within the BIA



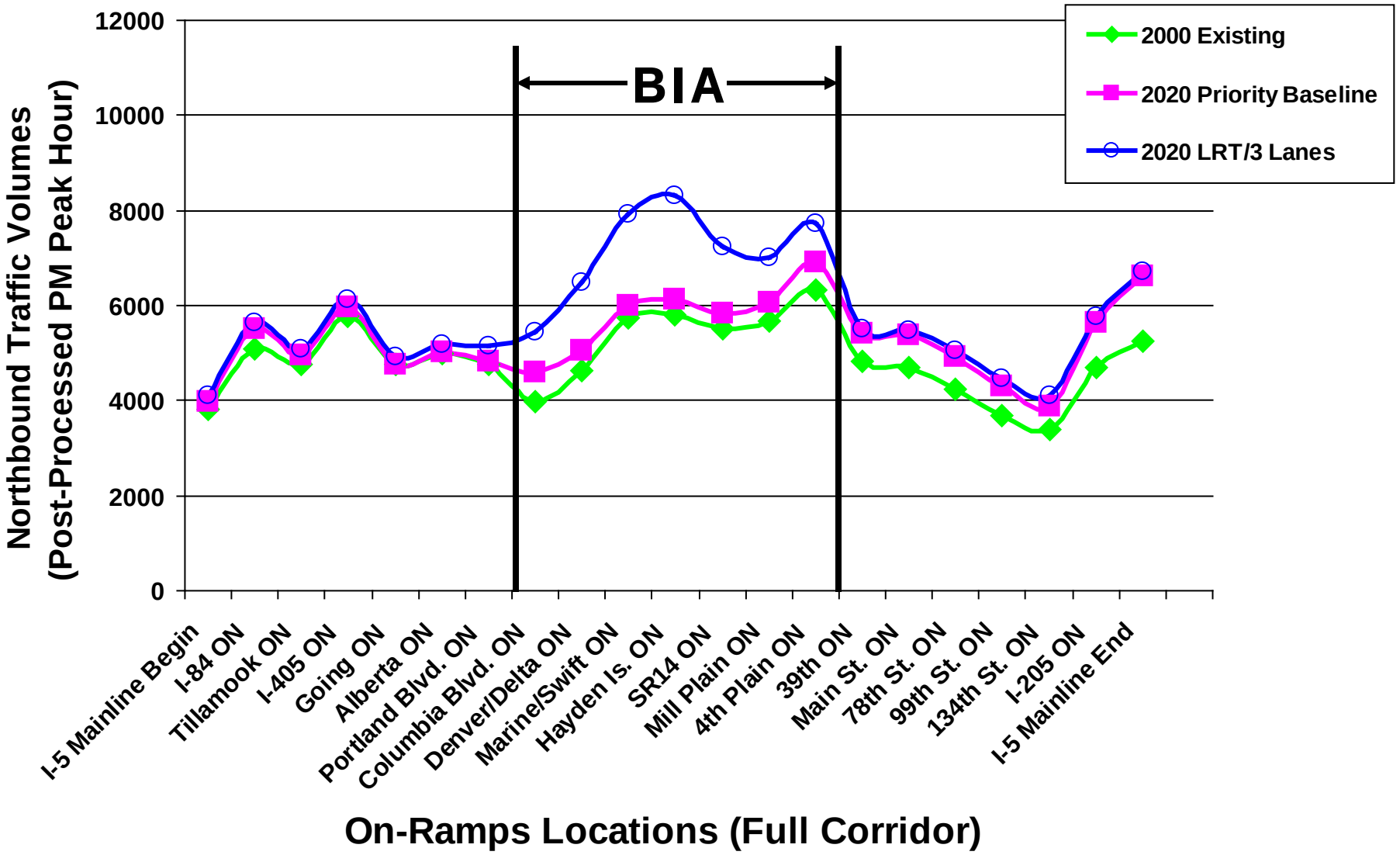
Southbound - AM Peak Period



Northbound - PM Peak Period

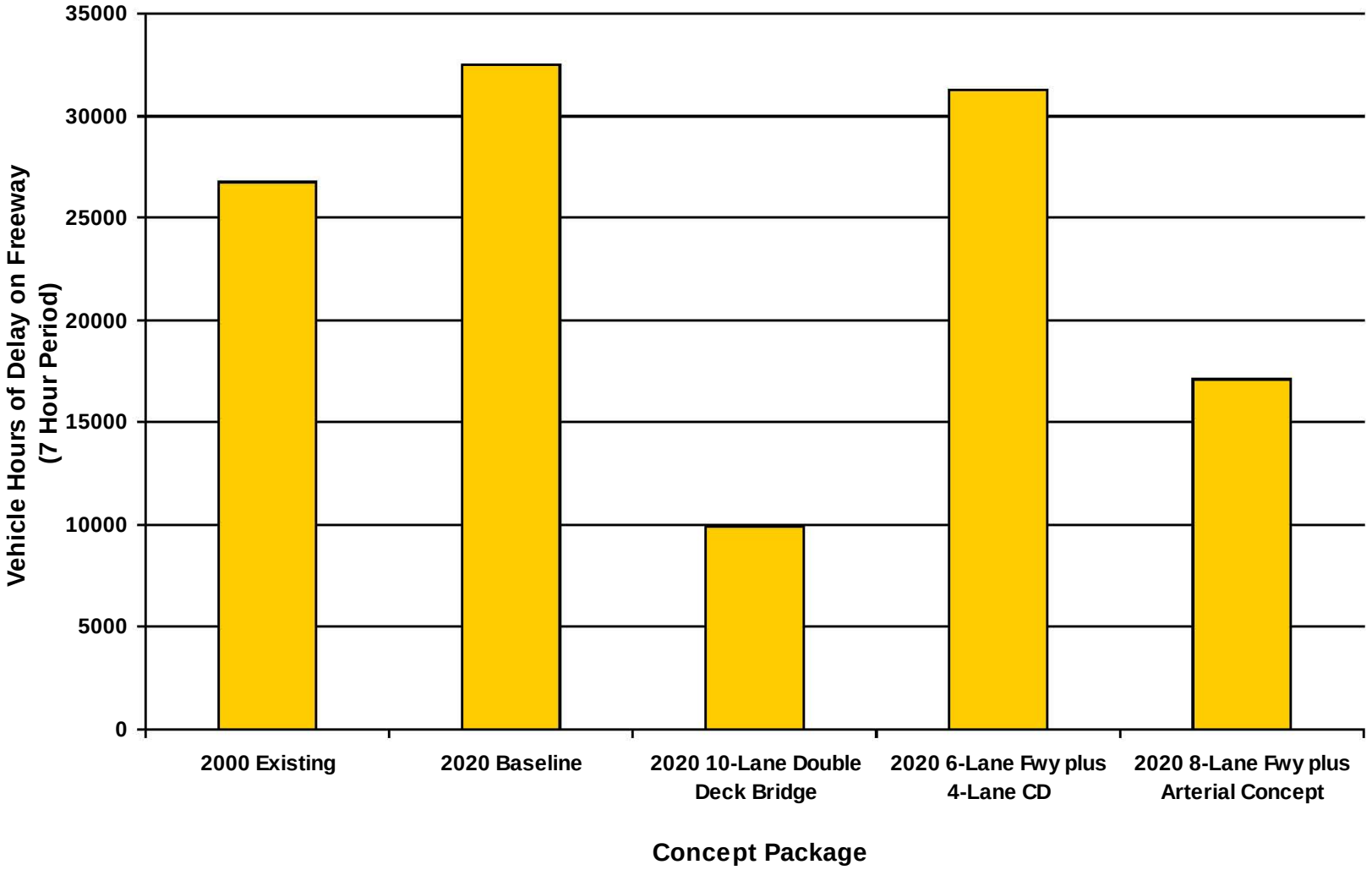
Northbound Travel Volumes

Along I-5 (PM Peak Hour)



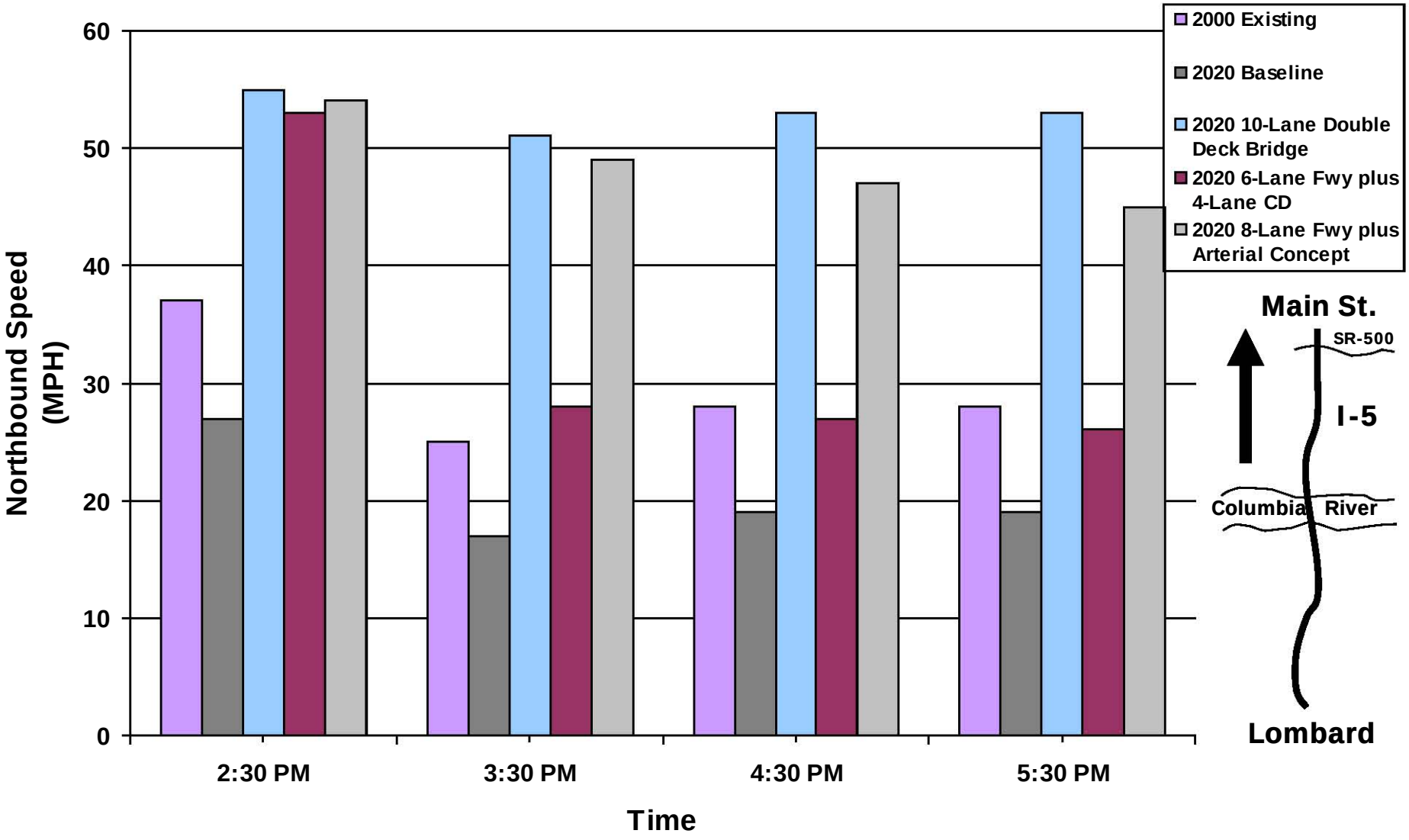
Vehicle Hours of Delay on I-5

(AM and PM Peak Periods)

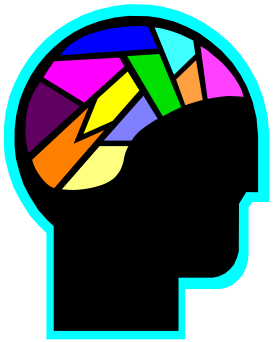


Average Speed

I-5 Northbound - Main St. to Lombard (All Traffic)



Overall, what did we learn?



- **Compared to Existing Conditions and Baseline 2020, the Bridge Influence Area improvements:**
  - reduce delay and
  - improve speeds
- **Some Concepts work better than others:**
  - 10-lane replacement bridge works best
  - 8-lane plus arterial system also works, but has less flexibility
  - The collector-distributor system does not work -- it has difficult design problems

Arterial Bridge With Additional Freeway Capacity Works

- The arterial connection, in conjunction with an additional freeway lane, can provide important transportation benefits:
  - Removes local trips from the freeway,
  - Reduces the need for freeway level improvements
- Further study is needed -- there may be more delay at interchange ramps and along arterials approaching I-5 than a freeway-only option

What about an Arterial-Only Bridge?

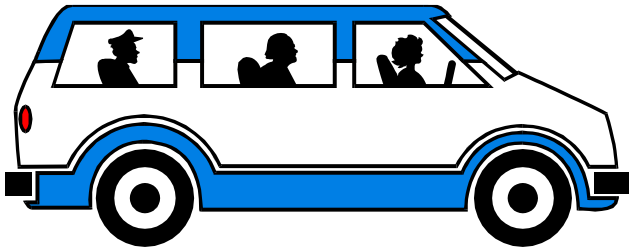
- A two-lane arterial-only bridge (no increase in freeway lanes) will not address the problems on the freeway.
- The arterial-only connection would only slightly improve freeway performance
- Congestion and delay would still increase substantially on I-5

Traffic Changes on Other Roads

- Minimal traffic increases on I-5 outside the Bridge Influence Area.
- In Portland:
  - traffic will increase on arterials near the BIA (Denver, MLK, Columbia), but
  - the effect of the capacity increase is dispersed as you travel away from the BIA.
- In Vancouver:
  - traffic will increase on SR 500 and SR 14
  - little change will occur on arterial roads

Other Transportation Performance Issues

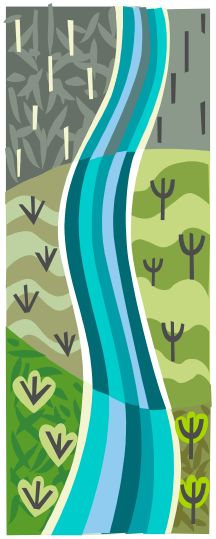
What about HOV?



- A corridor-wide HOV lane is a possibility with a new river crossing
- How well HOV works is highly dependent on design:
  - Direct access ramps should be considered at key locations (i.e., SR 500)
  - Bridge design also affects HOV performance
- Further design work in an EIS is needed to ensure that it will operate well and be used

What are the Potential Costs and Impacts?

Potential Costs and Impacts



- **Costs:** All improvements in the Bridge Influence Area are about $1.2 Billion
- **Fish:** All concepts have the potential for impacts to fish habitat with new crossings of Columbia River, North Portland Harbor and Columbia Slough
- **Parks Wetlands:** Potential impacts to the radio tower wetland and Delta Park depending on the Concept -- encroachments range from 60-240 feet.
- **Historical:** All concepts encroach on Ft. Vancouver Historical Site and all concepts would impact the Interstate Bridges

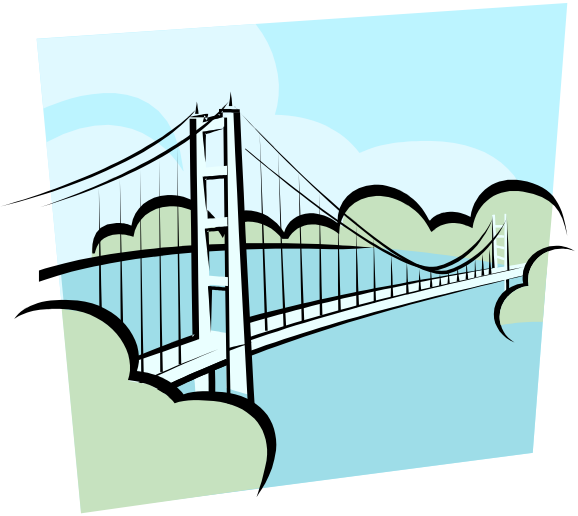
Property Impacts

- Most impacts would be to non-residential properties.
- Replacement bridge would have fewest property impacts
- The collector-distributor bridge system would have the most property impacts.
- The majority of impacts would occur in Portland where improvements cross Hayden Island.
- Additional work is needed to determine actual number and extent of property impacts.

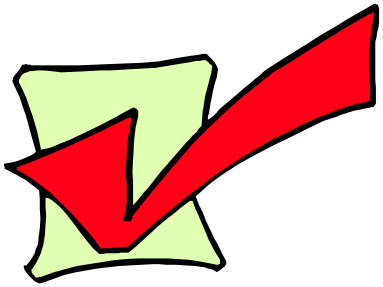
Key Resources - EIS Work

- Actual impacts to natural, cultural and historic resources will need to be determined in an EIS process.
- Mitigation may be required for some impacts.
- For impacts to resources:
  - Federal regulations require a determination in the EIS process that there is no feasible or prudent alternative.

More Work Required to Determine Bridge Type

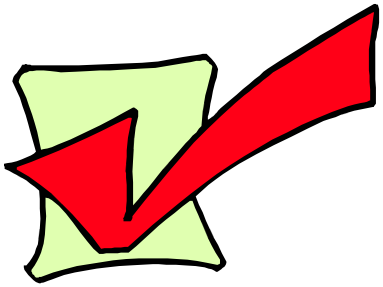


- Further study is needed to determine whether new bridge should be:
  - replacement or supplemental
  - joint use (light rail/freeway) or separate bridges



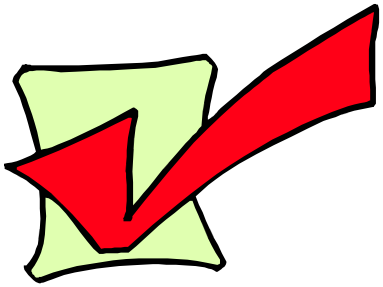
Draft Recommendations for Public Review

- New transit and vehicle capacity should be constructed across the Columbia River in the I-5 Corridor.
- For vehicles, there should be 3 through lanes (and not more than 3) in each direction and up to two short-distance lanes in each direction across the Columbia River (total 5 lanes in each direction).
- For transit, there should be two light rail tracks across the Columbia River in the I-5 Corridor.
- In the Bridge Influence Area, SR 500 to Columbia Blvd., the freeway needs to be designed to balance all of the on and off traffic, consistent with 3 through lane Corridor capacity and up to 5 lanes of bridge capacity, in each direction.



Draft Recommendations - Cont.

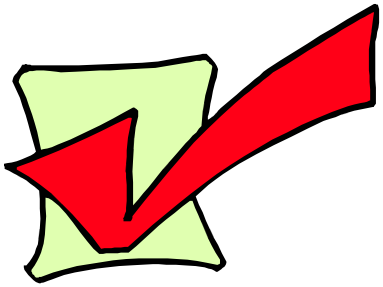
- In adding river-crossing capacity and making improvements in the Bridge Influence Area, every effort should be made to:
  1) avoid displacements and encroachments, and
  2) minimize the highway footprint in the corridor, and
  3) minimize the use of the freeway for local trips.
- The proposed design should include safety considerations.
- As a first step towards making improvements, the bi-state region should undertake an Environmental Impact Study for a new River Crossing and potential improvements in the Bridge Influence Area.



Draft Recommendations - Cont.

- In the EIS, the following BIA elements should be studied:
  - 8 or 10 lane freeway concepts
  - Replacement or Supplemental bridge
  - Joint use or non-joint use freeway/LRT bridge
  - 8-lane freeway with joint LRT/2-lane arterial
  - HOV throughout the I-5 Corridor

- The following concepts do not show promise for addressing the corridor's problems and should not be considered in an EIS:
  - Collector-Distributor bridge concepts
  - Arterial-only bridge concepts
  - Tunnel concepts



Draft Recommendations – Cont.

- One of the 3 through lanes should be designated for use as a high occupancy vehicle (HOV) lane during the peak period, in the peak direction. Further exploration is required in the environmental impact statement to optimize its design, particularly within the Bridge Influence Area; and to determine its overall effectiveness in meeting the Regional objectives for the I-5 Corridor.

Land Use Accord

New Land Use Work

- How can Washington and Oregon work together to protect the capacity and functionality of interchanges and transit stations?
- How can Washington and Oregon work together to achieve a functionally integrated, regional transportation and land use system (if new river crossing capacity is added)?

Land Use Trends Regardless of Transportation Investment in the I-5 Corridor

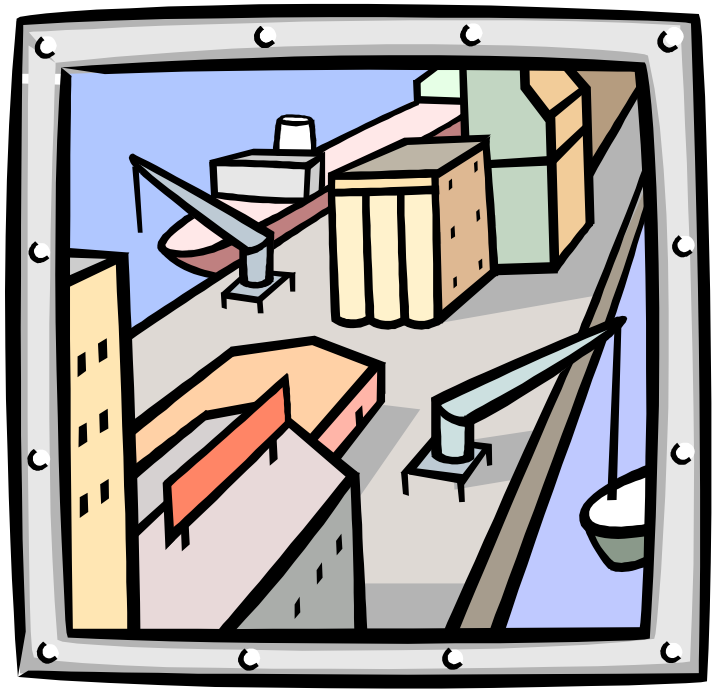
- Population and employment growth is locating at the urban fringe, within adopted zoning.
- More job growth in Clark County than anticipated in our current adopted plans
- Industrial areas are at risk of being converted to commercial uses:
  - threatens the availability of industrial land in the region
  - increases traffic congestion in the I-5 corridor.

Without Investment in the I-5 Corridor

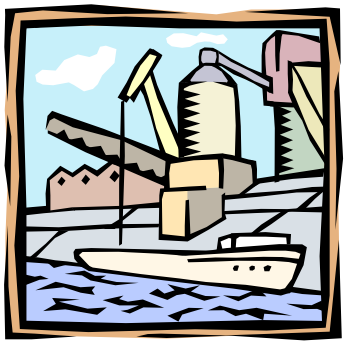
We can expect:

- Traffic congestion
- Reduced travel reliability

- This will have an adverse economic effect on industries and businesses in the Corridor.



With Highway and Transit Investments in the Corridor



- There will be travel timesavings that can be expected to have the following benefits:
  - attract employment growth toward the center of the region to the Columbia Corridor along the I-5 Corridor from elsewhere in the region
  - strengthen the regional economy by attracting more jobs to the region
  - new job opportunities for residents near the I-5 corridor because of their close proximity to the Corridor improvements being considered
  - mixed use and compact housing development around transit stations

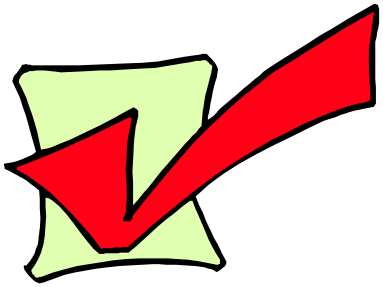
Investments Also Carry Risks if Growth is Not Managed

- Increased demand for housing in Clark County due to the location of jobs in the center of the region
- Increased pressure to expand the Clark County urban growth area along the I-5 Corridor to the north.
- Industrial areas are at greater risk of being converted to commercial uses at new and improved interchanges with the improved travel times at these locations.

Growth Must Be Managed

To ensure that:

- Growth in Clark County does not result in new capacity being used by commuters, instead of for goods movement
- The expected life span of investments is not shortened
- Scarce industrial land is not converted to commercial uses
- Zoning and regulatory changes occur to attract mixed use and compact housings around transit stations.



Draft Recommendations for Public Review

- To protect existing and new capacity and support economic development, jurisdictions and agencies in the Corridor need to develop and agree on a plan to manage land development to avoid adversely impacting I-5 or the Region's growth management plans.
- RTC and Metro, along with other members of the current Bi-State Transportation Committee, should adopt and implement a Bi-State Coordination Accord.
- The Accord signatories develop the operational details through the proposed bi-state Coordination Committee.

Key Elements of the Land Use Accord

Jurisdictions and Agencies Agree To Protect I-5 Corridor and Will:

- Manage development to:
  - preserve mobility and protect industrial land along I-5.
  - protect existing, modified and new interchanges
- Adopt development plans for transit station areas
- Coordinate management plans

Key Elements of the Land Use Accord- Cont.

Bi-State Transportation Committee Will Expand Role to:

- Review and advise JPACT, RTC, other councils, commissions and boards on:
  - Management plans, interchange plans and agreements and transit station plans for the I-5 corridor.
  - Other transportation, land use and economic development issues of bi-state significance.

Key Elements of the Land Use Accord- Cont.

Jurisdictions Agree:

- Before New Cross River Capacity is Added:
  - to adopt drafts of management plans, agreements and actions and include in environmental documents
- Before I-5 widened at Delta Park:
  - form Bi-State Coordination Committee
  - Have Committee review environmental documents
- Complete plans to manage existing interchanges with deliberate speed.

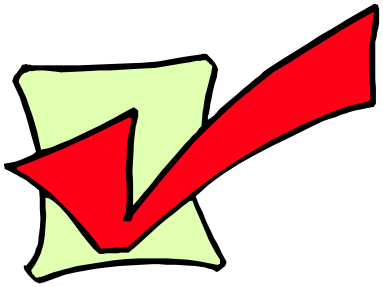
Transportation Demand Management

New Work for Transportation Demand Management

- What Transportation Demand Management and Transportation System Management strategies should be implemented to improve our mobility?

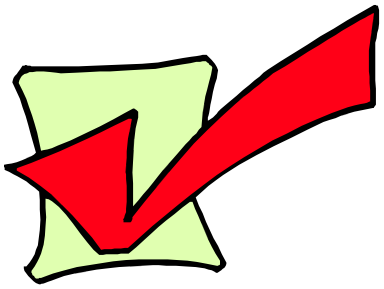
Findings

- TDM/TSM strategies are an effective and important part of the I-5 Corridor Strategic Plan.
- No silver bullet - we need a coordinated system of TDM/TSM actions to be effective.
- Transit service is the most important investment necessary to achieve TDM/TSM targets.
- Additional work is needed to determine the optimal mix, costs and effectiveness of TDM/TSM strategies.



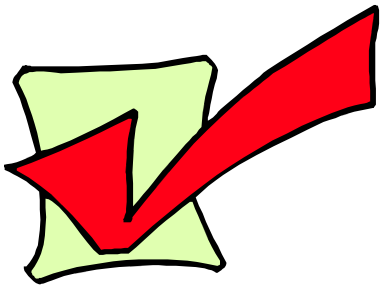
Draft Recommendations for Public Review

- A Regional commitment should be made to an expanded and enhanced comprehensive mix of TDM/TSM strategies in:
  - Alternative Mode Services
  - Work-Based Strategies
  - Public Policy and Regulatory Strategies
  - Pricing Strategies
  - TSM Strategies
- Additional funding needs to be sought for transit service and other TDM/TSM strategies.
- Regional transportation partners should prepare an “I-5 TDM/TSM Corridor Plan” with guidance from the proposed “Bi-State Coordination Committee”



Draft Recommendations for Public Review

- Targets are needed to measure success.
- Recommended **Interim Targets**:
  - **Corridor**:
    - Increase Non-Single Occupant Vehicle (SOV) share across the Columbia River in peak periods; 38% now and 43% in 2020.
    - Maintain average, mid-day travel speeds through the I-5 Corridor at 70% of the maximum posted speed limits for trucks traveling between I-405 and I-205.
  - **Region**:
    - Reduce daily VMT/capita for the urban areas of the Region by 10% by 2020.
    - Increase peak period travel reliability in the Corridor by maintaining travel times for all vehicles.
- **Final Targets** need to be determined by the Region through the I-5 TDM/TSM Corridor Plan.



Recommended Current Actions

These actions with an estimated budget of $1.87 million include:

- Education and outreach.
- Promote business subsidy of transit passes for employers.
- Promote carpoolmatchNW.org.
- Offer guaranteed ride home at work sites.
- Work to integrate C-TRAN and Tri-Met customer information.
- Explore business and community interest for additional and/or expanded Transportation Management Associations in the I-5 Corridor.
- Increase coordination between Oregon and Washington Transportation Management Centers.
- Identify ramp meter locations and coordinate bi-state ramp meter timing for I-5 and I-205

Environmental Justice

New Work on Environmental Justice

- What low income and minority communities might be affected?
- What do these communities define as impacts?
- Are there benefits that could off-set or mitigate the impacts?
- What outreach and involvement tools should be used to get meaningful input from affected communities?

What is Environmental Justice?

- It is about being fair - ensuring that minority and low-income populations are not exposed to an unfair burden of impacts from government programs, policies and activities
- Guided by:
  - President's Executive Order 12898, 1994
  - Title VI of the 1964 Civil Rights Act

Environmental Justice Principles

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Environmental Justice Communities in the Project Area

In Portland and Vancouver, most of the neighborhoods along the freeway and light-rail corridors have more low-income, and/or minority households than the average for the region

Affected Communities Help Define Environmental Justice

- The community helps define:
  - who are the affected low income and minority communities
  - what are the impacts to the community
  - what is the process to involve the community

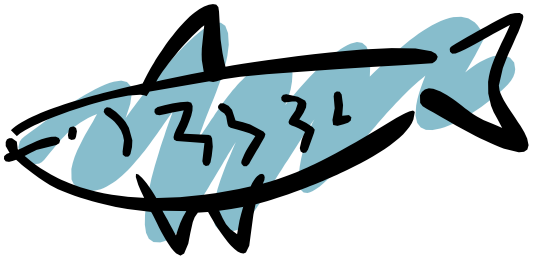
- Public involvement defines what are the benefits to the community.

What We've Heard So Far About Potential Impacts

- **Transportation:**
  - Increase in traffic on local streets and other freeways
  - Access to jobs and services for low income communities
  - Unsafe pedestrian and bike conditions during construction
  - Safety
  - Increased cars and commuting
  - Change in access to homes
  - Access to businesses during construction

Potential Impacts for Further Study - cont.

- **Environment and Health**
  - Increase in air pollution and related health impacts
  - Increased noise
  - Impacts to streams and fish
  - Impacts to soil



- **Historic and Cultural Resources**

Potential Impacts for Further Study - cont.

- **Property Impacts**
  - Displacement of homes
  - Displacement of businesses

- **Employment and Economic Opportunity:**
  - Access to jobs
  - Creation of jobs
  - Construction impacts on businesses

Potential Impacts for Further Study - cont.

- **Quality of Life**
  - Character and connectivity of neighborhoods
  - Noise
  - Lighting
  - Visual
  - Odor
  - Loss of natural areas and parks
  - Loss of access to natural areas and parks

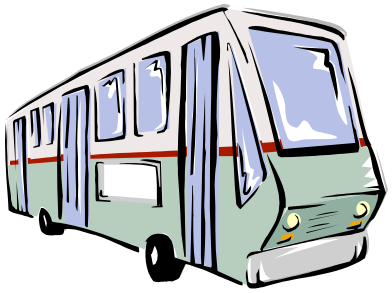
What We've Heard So Far About Possible Benefits

- **Employment and Economic Opportunity**
  - Access to jobs
  - Job opportunities from the project
  - Local business support and growth

- **Health and Community Services**
  - Health care support
  - Transportation access to health and human services
  - Education on health issues

Benefits to Consider - cont.

- **Environment**
  - Better air quality data
  - Air quality enhancements
  - More green spaces, parks and natural areas
  - Stormwater treatment to protect streams
- **Housing:**
  - More housing for people with low incomes
  - Noise and air quality enhancements of affected homes
  - Preservation of homes

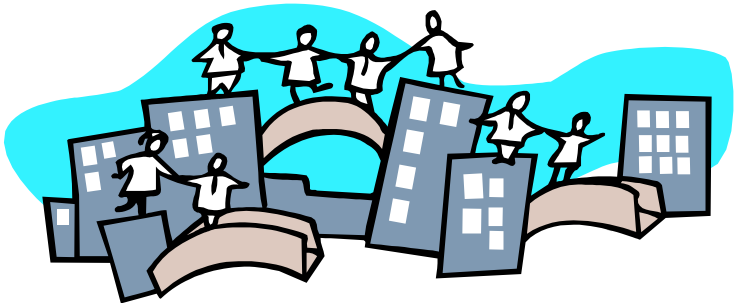


Benefits to Consider - cont.

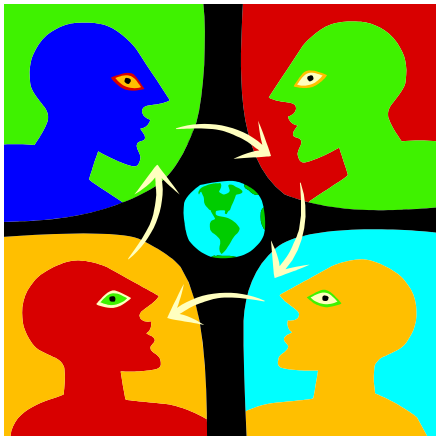
- **Transportation**
  - Improved access to jobs and services for people with low incomes, people of color, minorities
  - Improved bike and pedestrian safety
  - Improved connectivity between communities east and west of the freeway
  - Reduced single occupant vehicles
  - Better transit connections
  - Traffic calming in neighborhoods
  - Bi-state coordination of land use and transportation

Potential Benefits for Further Study - cont.

- **Community Building and Livability:**
  - More community amenities
  - Improved community connectivity
  - Improved capacity of low income and minority communities to be advocates for self and community
  - Support of community building activities
  - Support schools and other community resources
  - A community mitigation fund



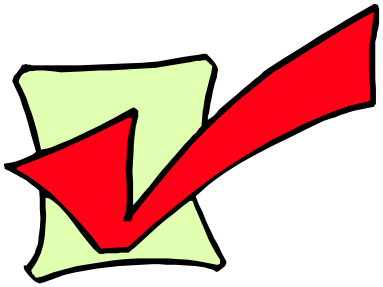
Ideas for Effective Outreach



- Improve community capacity to participate in project/process
- Apply environmental justice to its fullest
- Use a variety of outreach tools
- Decentralize methods of outreach
- Establish culturally sensitive, community-based outreach program
- Build community and one-on-one relationships

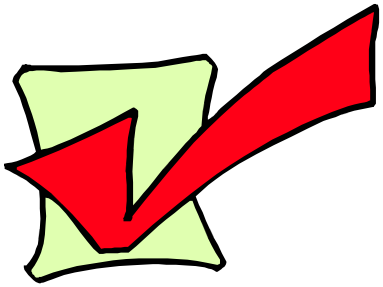
Ideas for Effective Outreach - Cont.

- Recognize diversity of non-English speaking groups
- Have tangible, accessible displays
- Make information and bureaucracy understandable
- Use community media to reach people
- Ensure culturally sensitive communication with immigrant groups



Working Draft Recommendations

- Complete a list of groups/agencies to work with for outreach
- Map low-income and minority communities based on:
  - further work to determine the most appropriate criteria and method
  - full 2000 census data, available summer 2002
- Take stakeholders' list of potential impacts into EIS as a starting point for more analysis.
- In the EIS work with affected communities to explore ways to offset impacts and/or bring benefits to the community. Use the stakeholders' list as a starting point.

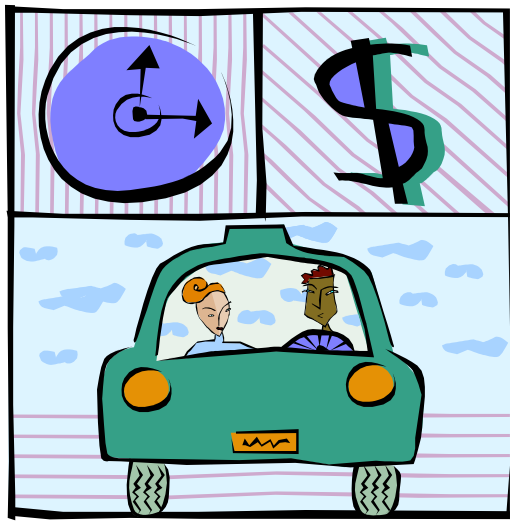


Working Draft Recommendations - Cont.

- Develop a public outreach plan for EIS process that includes special outreach to low-income and minority communities.
- Form and coordinate two working groups for the EIS -- one for public involvement and one for environmental justice.

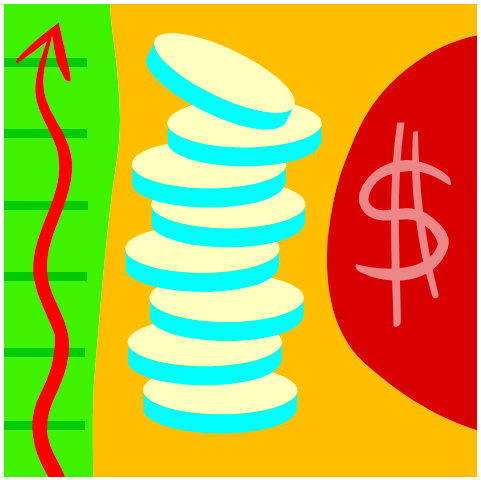
Financing

New Work on Financing Options



- What are the promising financing tools?
- What are the next steps for development of a financing plan to pay for the improvements?

How to Pay for the Improvements?



- Improvements are high cost and will require a variety of funding and financing tools.
- No single revenue source can fund projects.
- There are promising federal, state, and local revenue sources that, in combination, can finance the projects.
- Phasing of projects can help make financing more feasible.

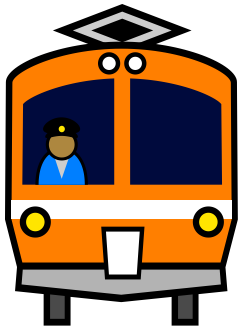
Cost of the Highway and Transit Improvements

- Bi-State transportation improvements for the I-5 corridor will be an expensive undertaking
- New state, federal and local revenue will be needed to construct the projects
- OR and WA will need to rely on several funding and financing tools
- Requires leadership and cooperation of many entities

- Estimated Capital Costs in 2001 Dollars:
  - Bridge and Bridge Influence Area[1] = $1.2 billion
  - Light Rail Loop = $1 billion

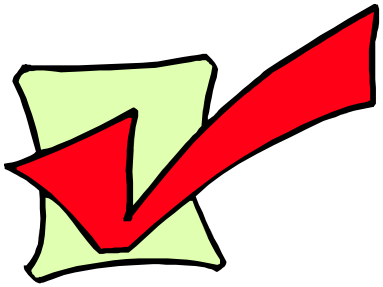
[1] Includes light rail costs of approximately $150 - $200 million through the BIA

Transit Operations Funding



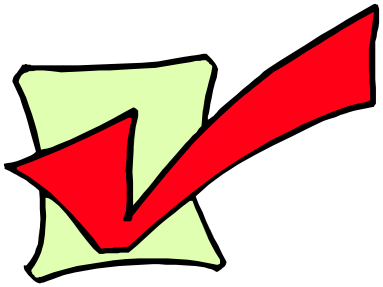
- To be fully effective, freeway and light rail investments must be supported by a significant increase in transit service.
- Additional transit service is needed to:
  - Bring transit riders to the light rail loop
  - Reduce reliance on the freeway system through transportation demand management actions

- The region must have a focused effort to determine how to meet goals for increased transit service.
- Successful implementation of the draft recommendations requires a significant increase in transit operating revenue.



Working Draft Recommendations

- The I-5 Partners should seek funding to widen I-5 to 3 lanes between Delta Park and Lombard.
  - This project will be ready for construction within 2 years.
- OR, WA and the Portland/Vancouver region should develop a financing plan for transit and highway capital projects
  - Starting point is to look at the “promising” financing tools



Working Draft Recommendations - Cont.

- Tri-Met and C-Tran need to increase revenues for a significant expansion of transit service, starting within the next five years.
- Tri-Met and C-Tran efforts to increase transit operating revenue should be coordinated with the new Bi-State Coordinating Committee.
- The Bi-State Coordinating Committee should establish regional transit financing commitments that will allow for:
    - an aggressive bi-state TDM program and
    - an expansion of transit service to support construction of the light rail loop.

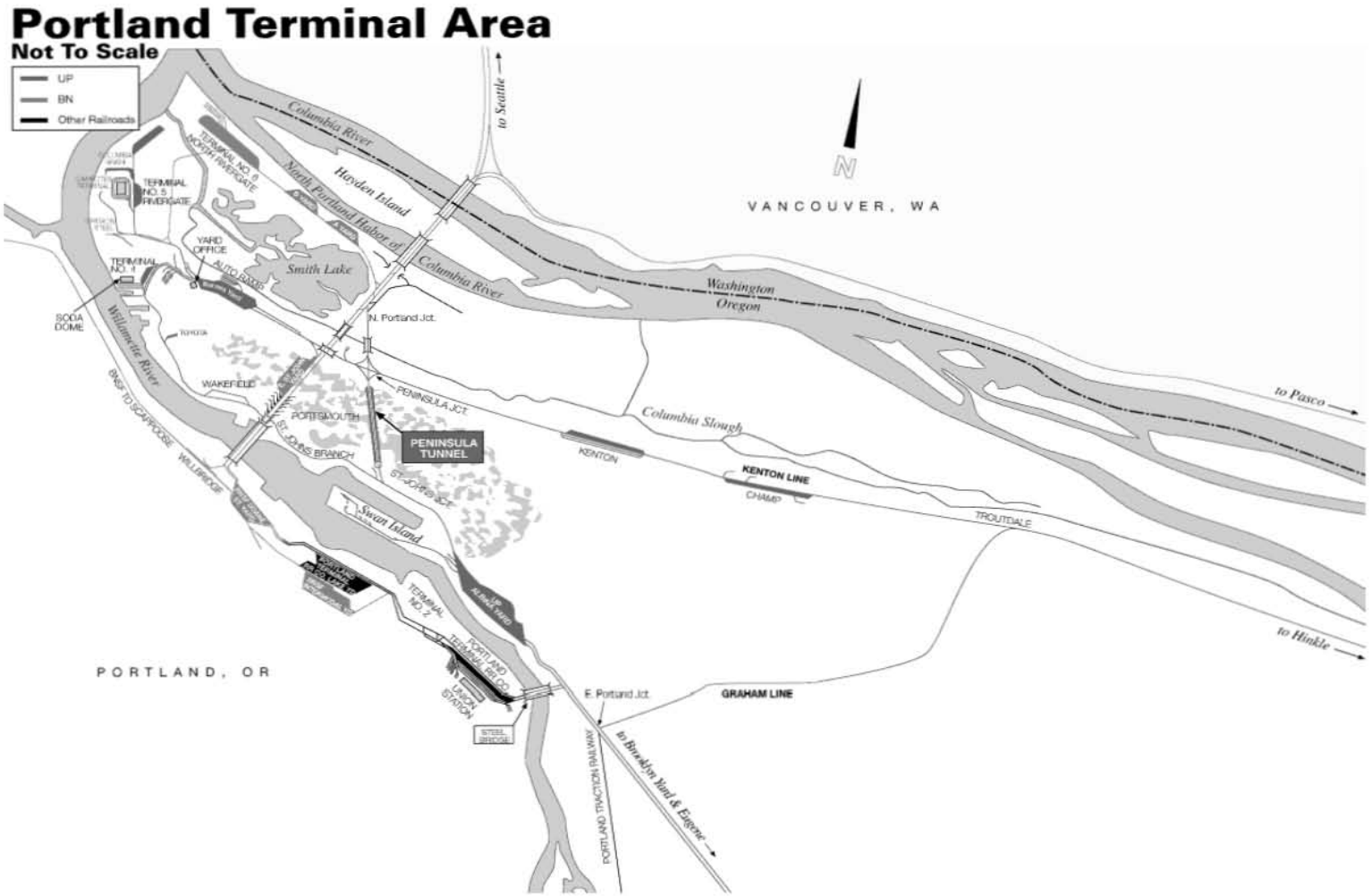
Freight and Passenger Rail

Freight Rail/Passenger Rail

- What are the needs of the freight and passenger rail system?
- What is the viability of commuter rail in the corridor?
  - Is there new data on Commuter rail that would indicate that it could be more viable than previous studies indicated?

Portland-Vancouver is a key transportation hub:

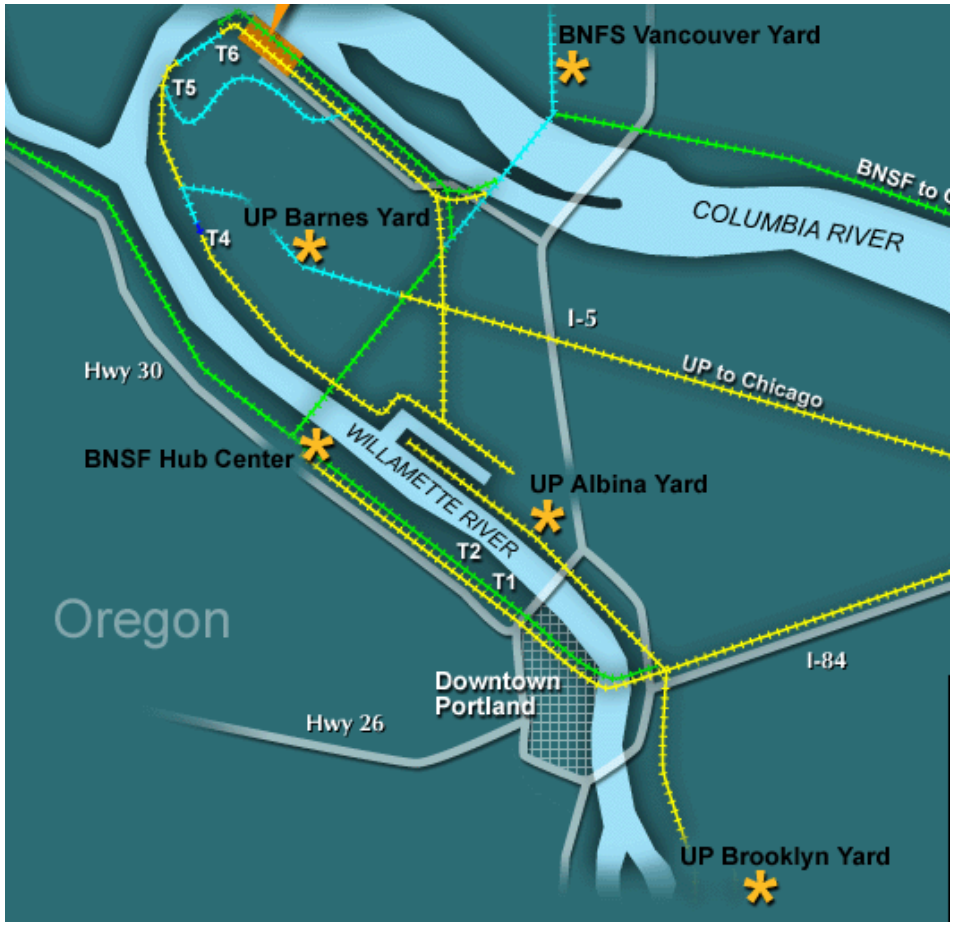
Portland/Vancouver Rail Network



Current Situation:

- The region contains five major rail yards, and numerous lesser yards and port terminals.
- The region's rail system serves the state's largest collection of industrial customers.
- The region's rail system accesses a major deep draft ocean port.
- The rail system is owned by private rail companies.

BNSF and UP Systems in Portland/Vancouver



- 63 freight trains and 10 Amtrak trains per day cross the BNSF bridge
- Freight trains projected to reach 90 per day in 20 years.
- Long range passenger service plan calls for 26 trains per day

I-5 Rail Capacity Study

- What is the capacity of the Portland-Vancouver rail network to meet present and future freight and passenger needs?
  - Is capacity sufficient to accommodate present and future rail freight needs? **NO**
  - Is there sufficient capacity to support future development of the Ports of Portland and Vancouver? **NO**
  - Will there be capacity to support increased intercity passenger service from Eugene to Portland to Seattle? **NO**

Initial Modeling:

- 2001 Base
  - 2001 volumes on the existing system
- 2001 with “incremental improvements”
  - Same train volumes, PLUS
  - Incremental system improvements that were agreed as necessary by railroads and states.

Summary Measures 2001 Base
(96 hours)

Measure	Freight	Passenger
Average Speed	12.3 mph	42.3 mph
Hours of Delay	402 hrs.	1.9 hrs.
Delay Ratio	18.2%	minor

Freight Congestion Comparisons

Measure	Portland / Vancouver	Chicago
Freight Trains	555	1977
Passenger Trains	38	1542
Average Speed	12.3 mph	12.5 mph
Hours of Delay	406.5 hrs.	813.0 hrs.
Delay Ratio	18.2%	20.0%

The Incremental Solutions

- Projects selected were:
- Agreed by railroads, ports, and state DOTs as viable if funding were available, and
  - Already well into planning or development, or
  - Operational or relatively low cost, and
- Total cost of all incremental improvements would be about $100 million

Freight Comparisons for 2001 Base with Incremental Improvements

Measure	2001 Base	2001 Base with Improvements
Average Speed	12.3 mph	13.7 mph
Hours of Delay	402 hrs.	226 hrs.
Delay Ratio	18.2%	11.3%

I-5 Trade Corridor						
Summary of 96 Hour Freight Train Forecast						
for 10-year Base Case						
Train Type		**Base**		**10-Year Forecast**		
		2001		**Number**		**Annual**
						Growth Rate
Intermodal		83		122		3.9%
Auto		13		19		3.9%
Priority Merchandize		23		29		2.2%
Merchandise		98		122		2.2%
Grain- loaded		25		35		3.4%
Grain- empty		17		23		3.2%
Other Unit		32		51		4.9%
Total		**291**		**401**		**3.25%**

Passenger Train Forecasts

	Daily Crossings of Columbia River Bridge
Base 2001	10
Expanded Base	18
Full Build Out	26

Work still needed:

- Testing growth assumptions against the incrementally improved system
  - How long before new capacity is “used up”
    - Freight
    - Passenger
- Better understanding of needed future capacity improvements

Conclusions to date:

- The system is already congested
- A series of relatively low-medium cost improvements could add significant capacity.
- However, growth will eventually:
  - Constrain the ability to manager further passenger expansion
  - Require major improvements to the network
- A major improvement could require:
  - Additional bridge capacity
  - Separation of passenger and freight operations

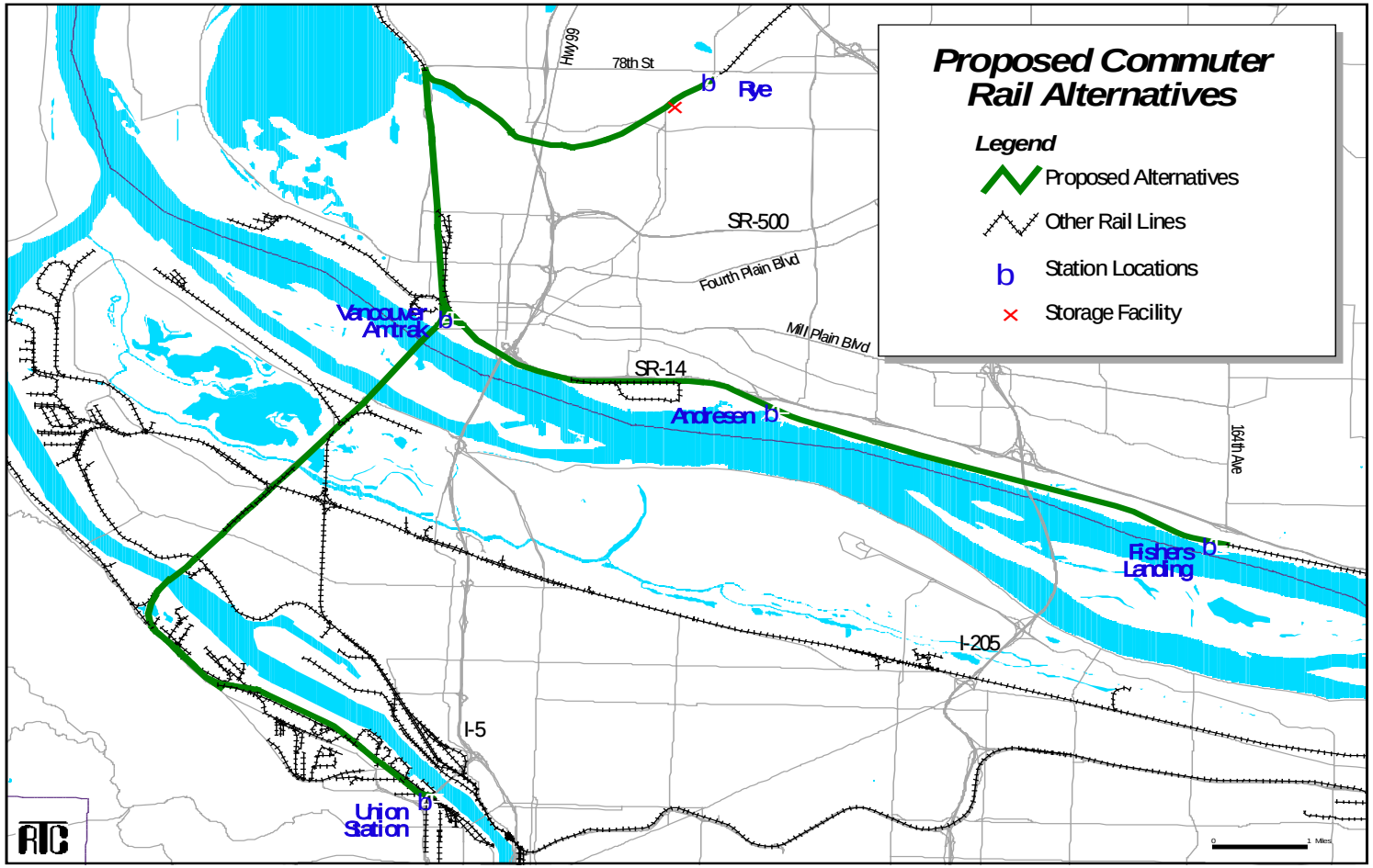
What happens if we do nothing?

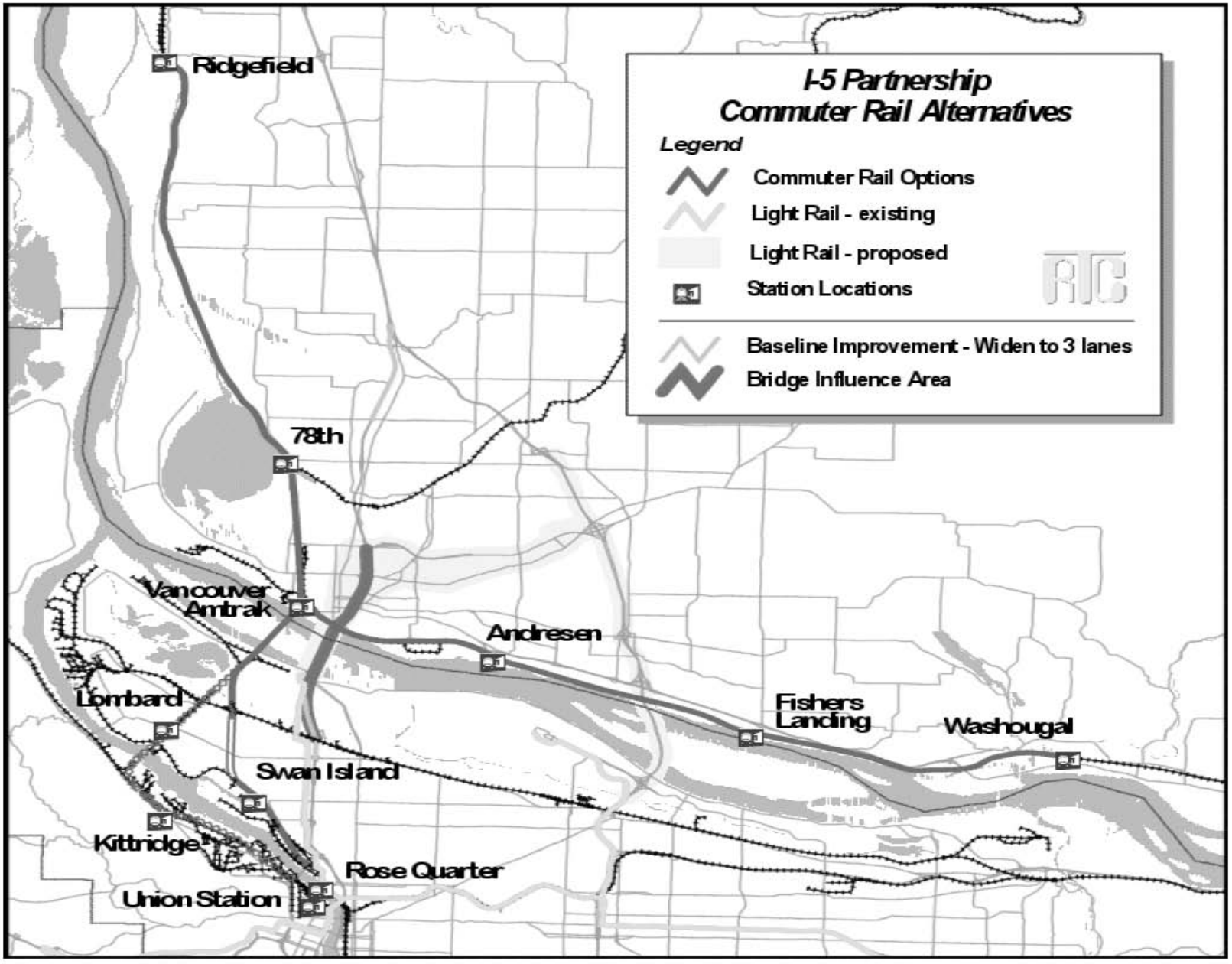
- Shipping costs will increase and reliability will decrease.
- Rail shippers will be forced to divert traffic, change modes or relocate.
- Intercity passenger service cannot grow.

Commuter Rail Analysis

RTC Commuter Rail Feasibility Study (1999)

Operating Plan




I-5 Partnership
Commuter Rail Alternatives
Legend
Commuter Rail Options
Light Rail - existing
Light Rail - proposed
Station Locations
Baseline Improvement - Widen to 3 lanes
Bridge Influence Area
RTC
Ridgefield
78th
Vancouver Amtrak
Andresen
Lombard
Fishers Landing
Washougal
Swan Island
Kittridge
Rose Quarter
Union Station

Comparison of Commuter Rail Studies

Element	1999 RTC Study	I-5 Partnership Study
Service	Peak hour only	Peak period, bi-directional
Headways	45 minutes (south of Vancouver)	15 min. combined routes (south of Vancouver)
Routes (from Portland terminal)	2: to Rye Junction (17 mi.); to Fishers Landing (19 mi.)	2: to Ridgefield (22 mi.); to Washougal (24 mi.)
No. of Trainsets	2	8
No. of Train Starts	20 per day	44 per day
No. of Stations	5	8-9
Average Speed	30 mph to Rye; 29 mph to Fishers Landing	46 mph to Ridgefield; 42 mph to Washougal
Scheduled Travel Time (in-train)	34 min. to Rye; 40 min. to Fishers Landing	29 min. to Ridgefield; 34 min. to Washougal
Capital Costs	$478M - $548M	$1.5B - $1.7B
Ridership	2,340	8,150

Key Issues

- Right-of-Way
  - Potential Displacements
    - Ridgefield line – 35 Residential
    - Portland - 4 - 5 industrial
    - Vancouver – 8 Industrial
    - Washougal line – 55 Residential
  - May require relocation of SR-14 or Evergreen Highway at several “pinch points” on Washougal line.
- Neighborhood Impacts
  - Areas along Evergreen Hwy (noise, traffic, retaining walls)
  - High frequency of feeder bus connections required to serve 78th St./Lakeshore and Ridgefield stations.

Key Issues (Cont.)

- Environmental Impacts
  - Ridgefield line traverses significant wetlands.
  - Environmental mitigation costs not included in analysis
- Rose Quarter Transit Center
  - Assumes LRT & bus capacity sufficient to connect with downtown Portland.
  - Cost for Transit Center and connections not included in analysis.
  - Not consistent with City of Portland plan designation of Union Station as Regional Transportation Center.

Key Issues (Cont.)

- Regional Land Use/Growth Management
  - Would need to assess conformance with Comprehensive Plans.
  - Would need to evaluate consistency with direction of growth in County.
- Higher level of cost uncertainty

  -Tunnel boring - Right-of-Way

  -Environmental mitigation - Transit connections
- Potential competition for transit funding
  - Elements of commuter rail may need to be funded from same ‘New Starts’ transit funding pool as LRT.

Findings

- System modeled provides relatively fast travel times.
- Serves areas not well served by transit.
  - Particularly suburban and outlying areas (Salmon Creek, North Clark County, I-205 Corridor, and East Clark County).
- Does not appear to serve same market as light rail.
- Cost of a separated network is over $1.5B - $1.7B.
  - Higher level of cost uncertainty
  - Additional feeder bus and Rose Quarter connections needed
- Right-of-way issues may be significant.

Findings (Cont.)

- Commuter rail service cannot operate effectively on the existing freight rail network.
- Commuter rail service becomes viable with a separated passenger rail-only network.
  - The high speed passenger rail program will drive the feasibility of commuter rail in the region.
  - A separated passenger-only rail network could free up constrained capacity on the existing freight rail network.
- Recommendations for commuter rail need to be made in the context of recommendations for the freight and inter-city passenger rail. Coming May 21st.

Next Steps….Staying Involved

Next Steps

May 2002:

- Public feedback on “additional work” options

- Task Force adopts draft recommendations:
  May 21st, 3:30 -10:00 p.m.
  Luepke Center, 1009 McLoughlin, Vancouver, WA
  Public Comment Period: 5:30 - 6:30 p.m.

June 2002:

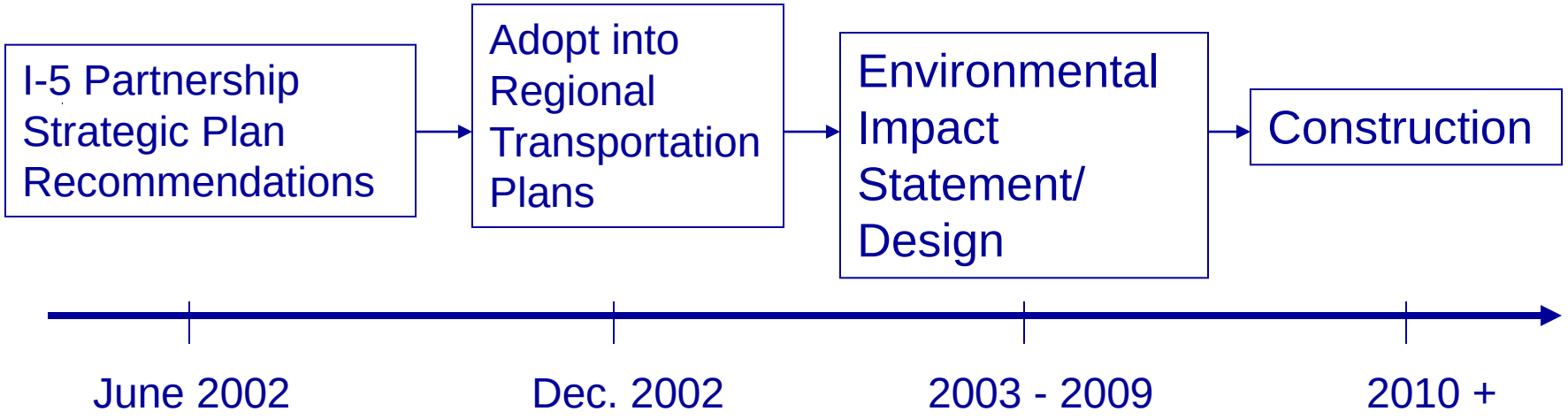
- Public review of final draft recommendations: June 10th and 12th at Open Houses
- Task Force adopts final recommendations and strategic plan:
  June 18th, 3:30 - 9:00 p.m.
  OAME, 4134 N Vancouver, Portland, OR
  Public Comment Period: 4:30 - 6:00 p.m.

Next Steps - Continued

Post 2002:

- Review by bi-state and regional transportation authorities
- Adoption into regional transportation plans
- Environmental impact studies on any major improvements recommended

Tentative I-5 Project Schedule

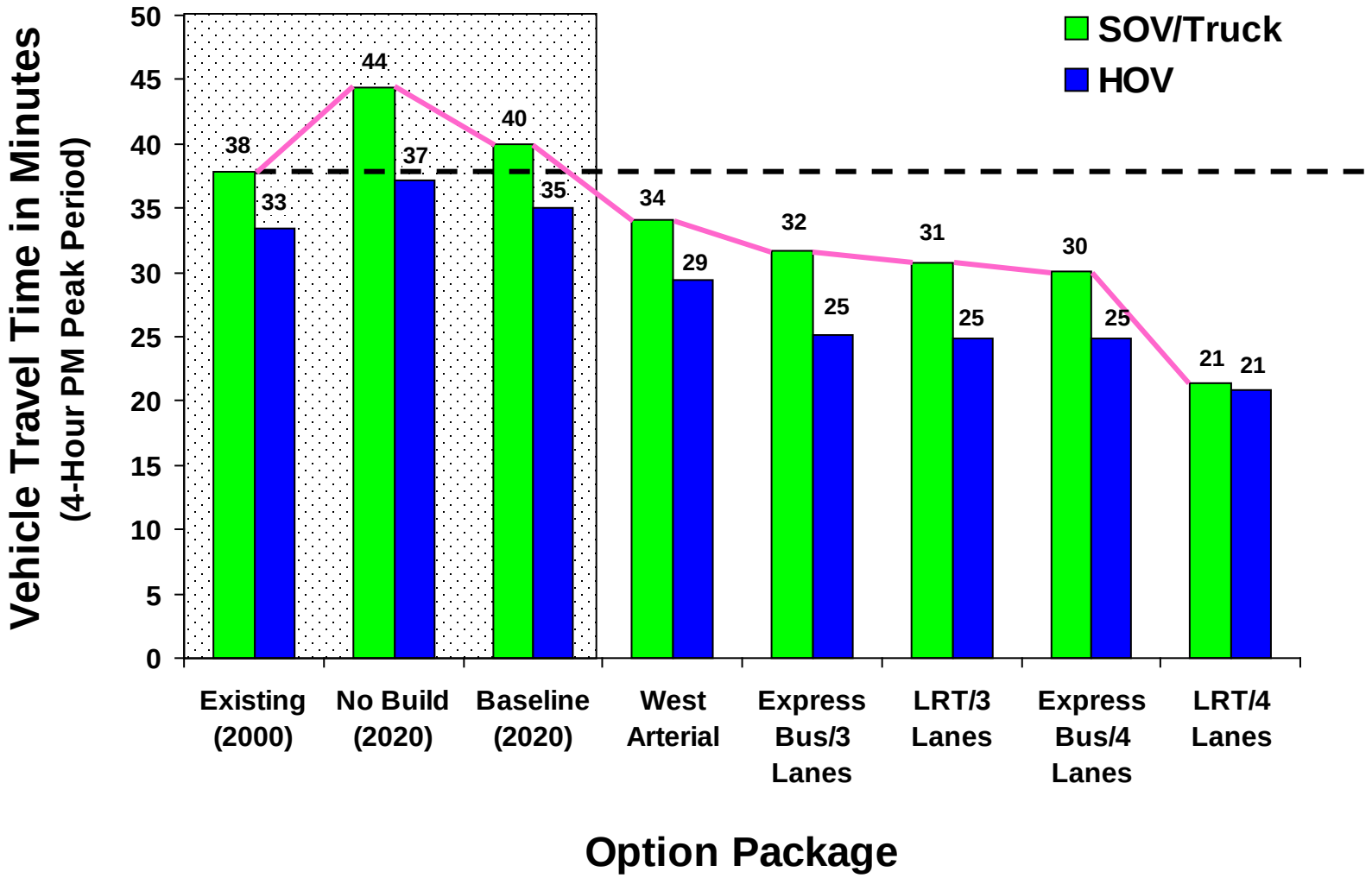


Option Packages Evaluated

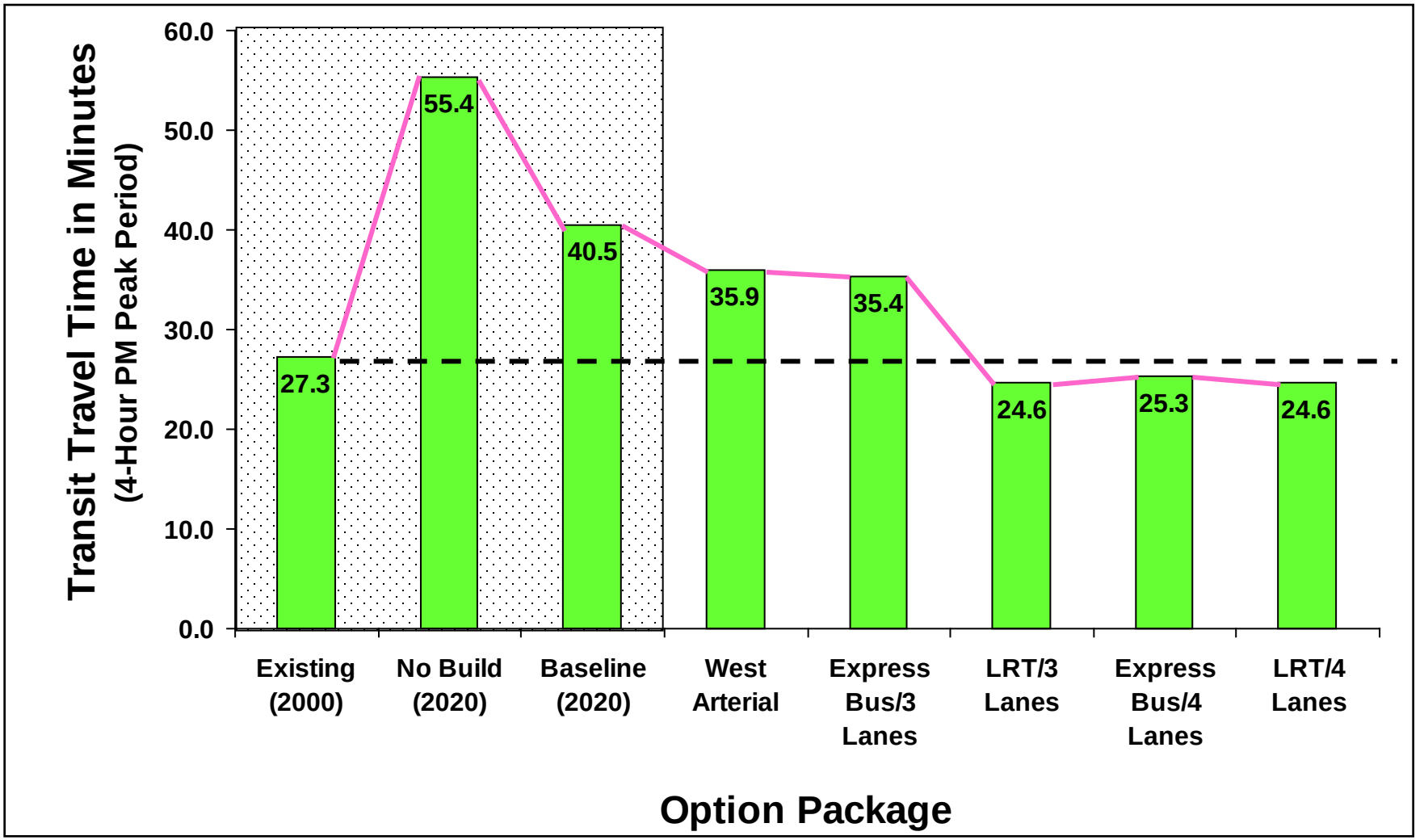
- No Build
- Baseline
- Express Bus/3 Lanes
- Light Rail/3 Lanes
- Express Bus/4 Lanes
- Light Rail/4 Lanes
- West Arterial Road

Vehicle Travel Times

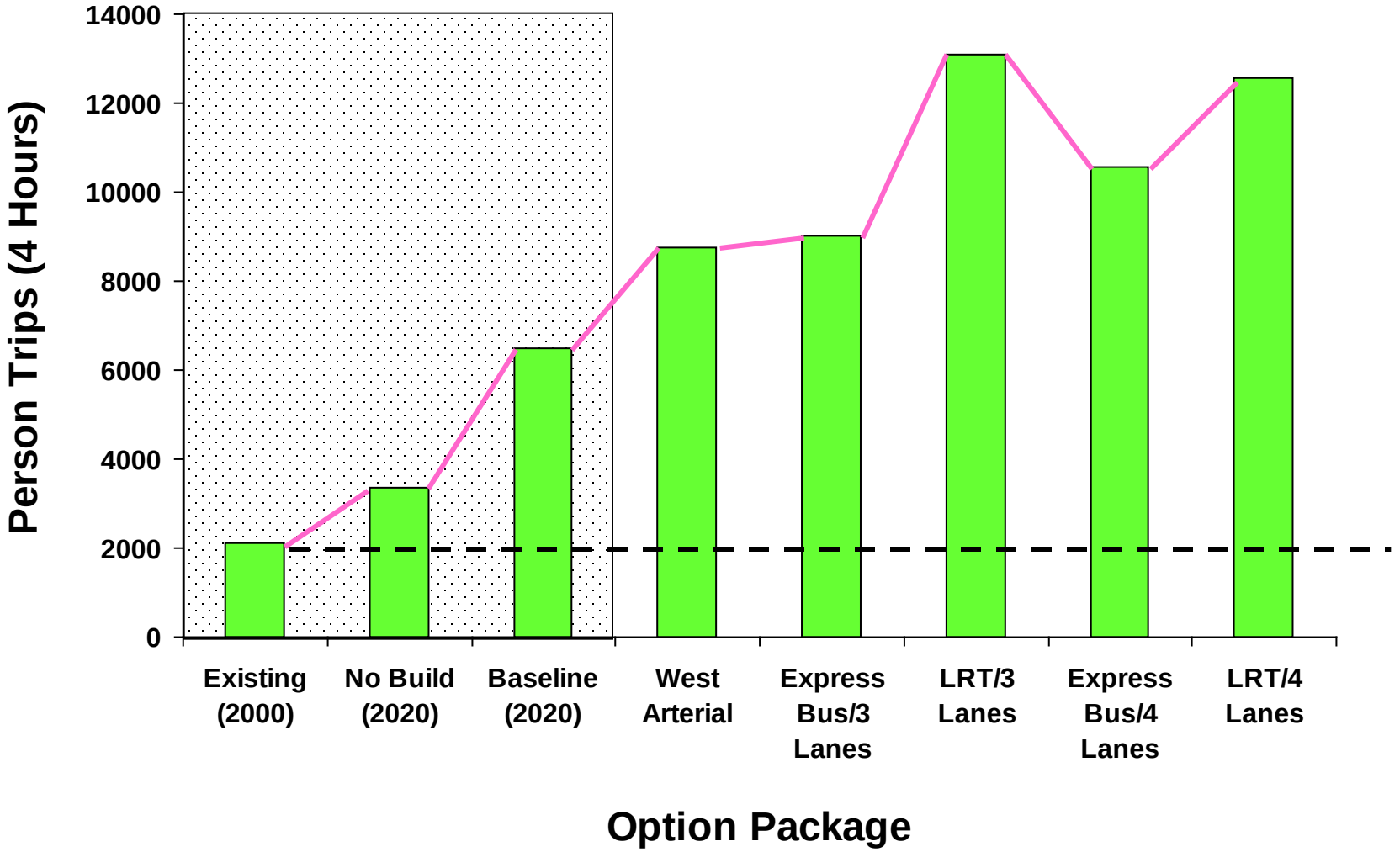
Downtown Portland to Salmon Creek (PM Peak)



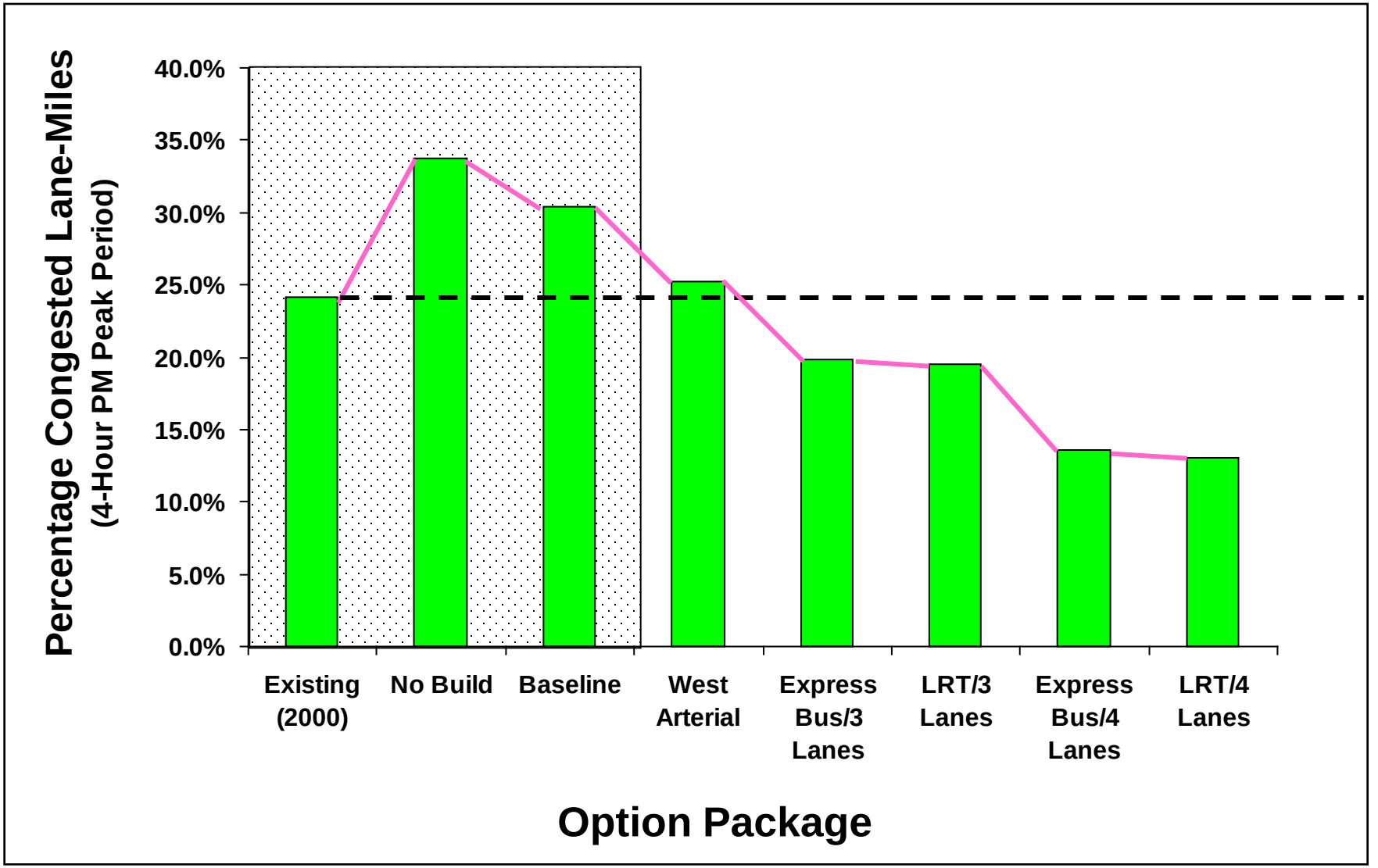
Transit Travel Time: Downtown Portland to Downtown Vancouver (PM Peak)



Transit Trips Across the Columbia River (PM Peak)

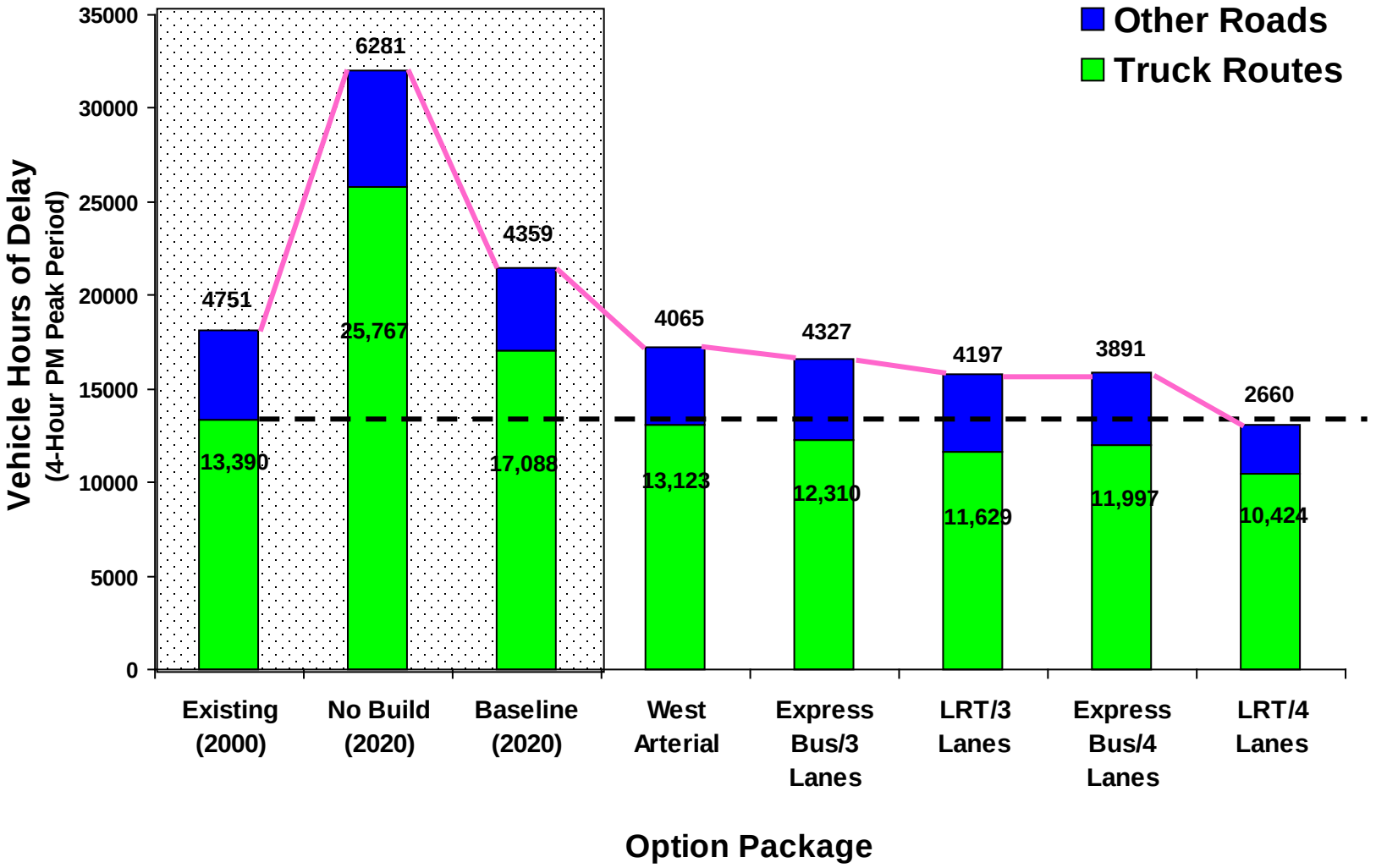


Congested Lane-Miles on I-5 and I-205 (PM Peak)



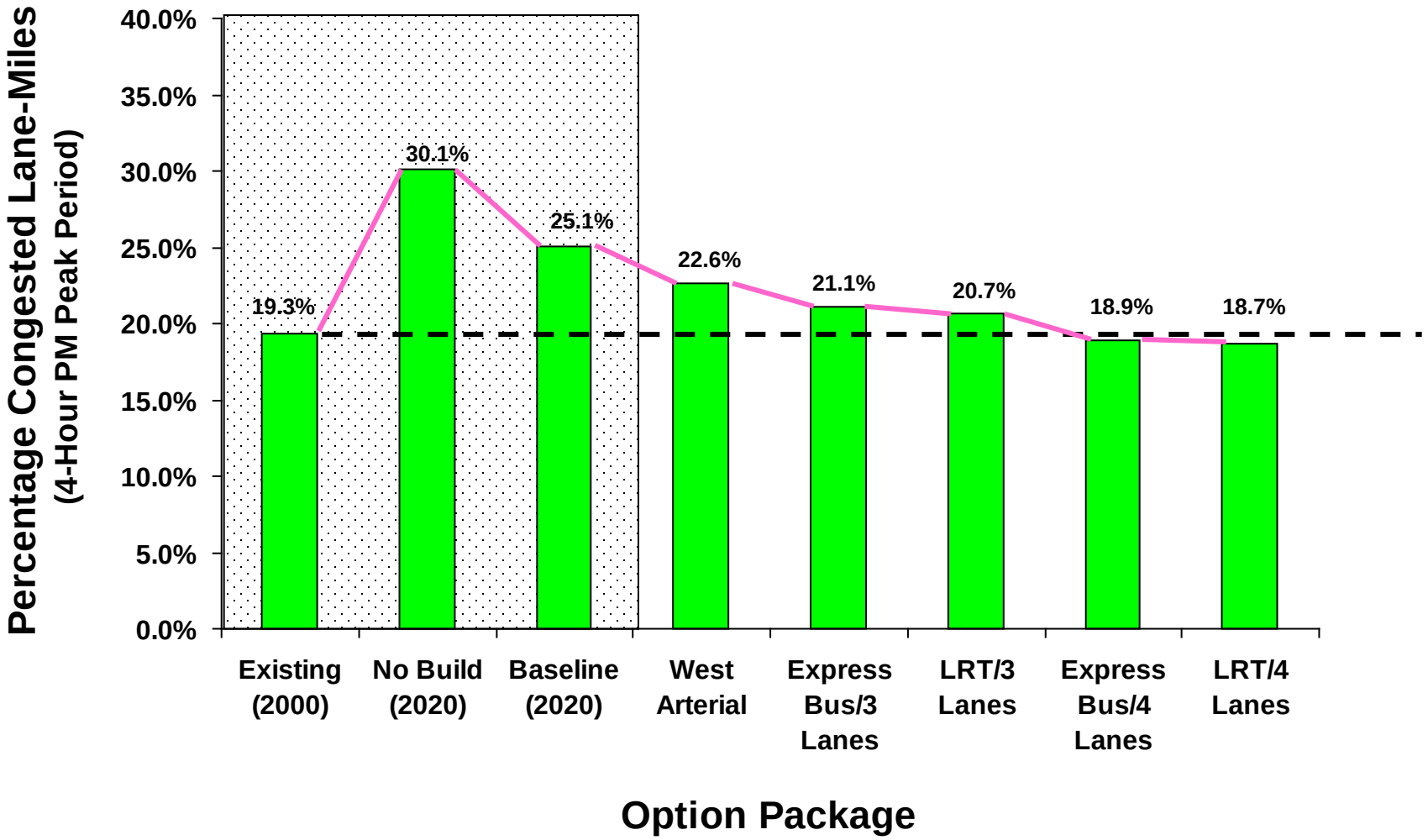
Vehicle Hours of Delay

In the Study Area (PM Peak)



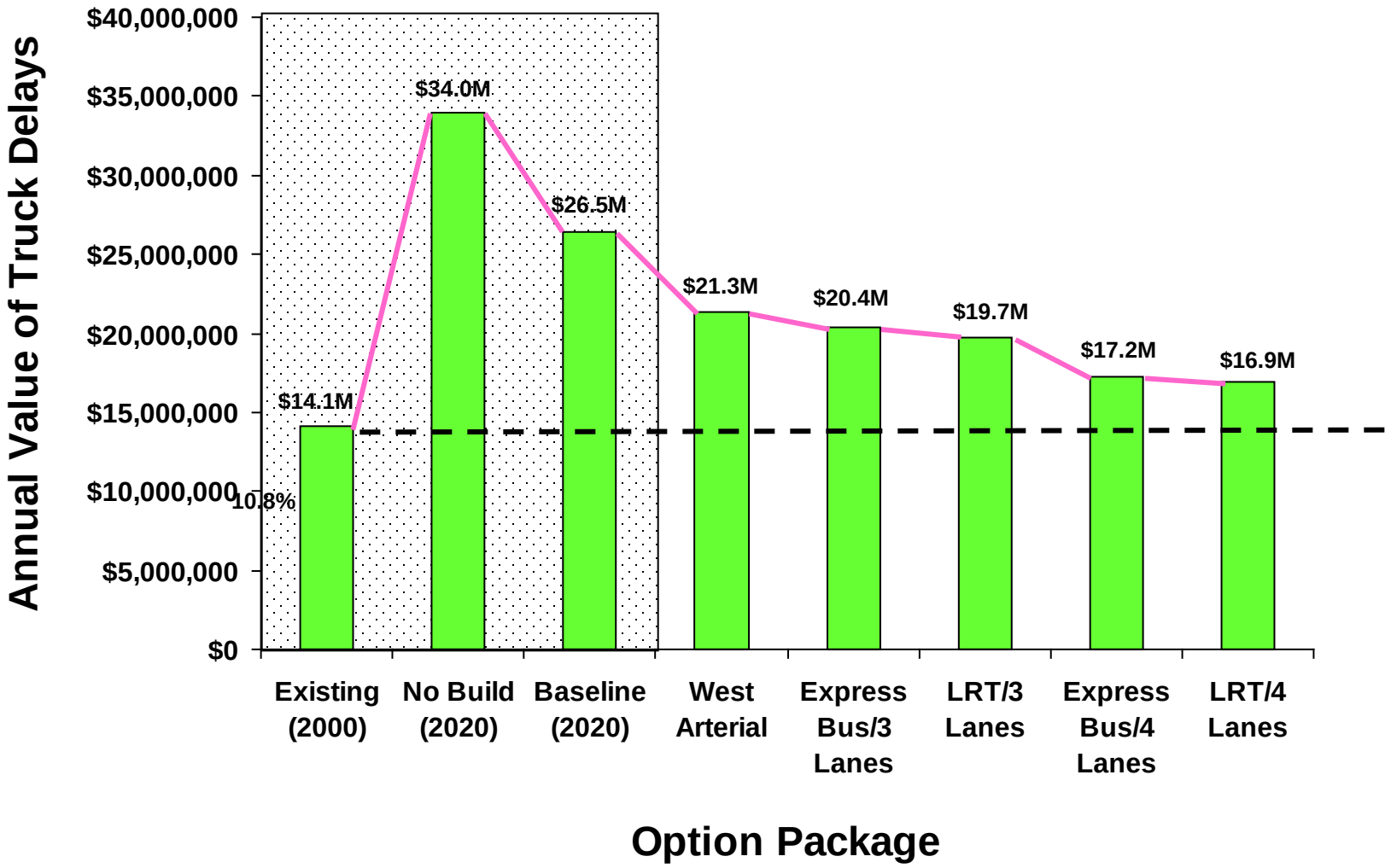
Congestion on Truck Routes

Congested Lane-Miles (PM Peak)



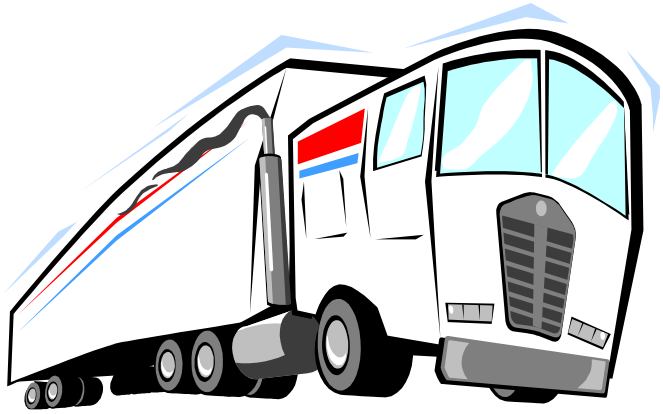
Value of Truck Delay

(In the Study Area)



How Do The Recommendations Address Freight Needs?

- **Eliminates bottlenecks at:**
  - Delta Park
  - Columbia River Bridge
  - 99th in Vancouver



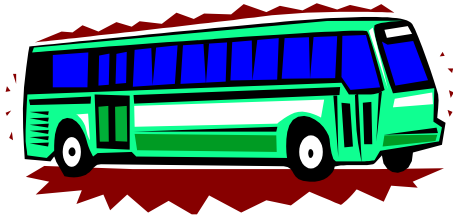
- **Significantly reduces:**
  - vehicle hours of delay on truck routes
  - lane miles of congestion on truck routes
  - the cost of truck delay

How Do The Recommendations Address Freight Needs?

- **Makes Columbia Blvd into a full access interchange:**
  - Provides a direct connection to I-5 for one of the region's busiest freight routes (Columbia Blvd).
  - Reduces congestion at the Marine Drive interchange.
  - Improves utilization of Columbia Blvd for trucks.

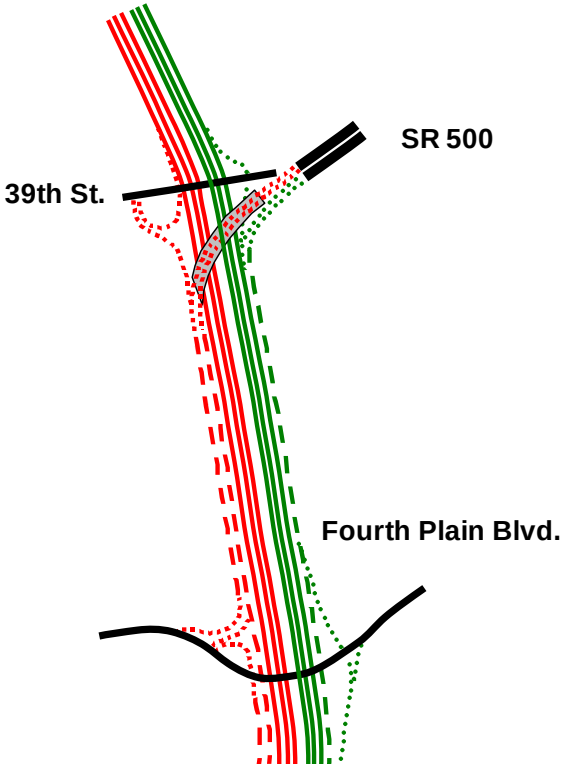
Benefits for Freight and the Economy

- Better access to and from key industrial destinations
- Better access to and from key employment centers
- Better travel times and less congestion on I-5
- More reliability and predictability on I-5
- More reliability and predictability in transit service

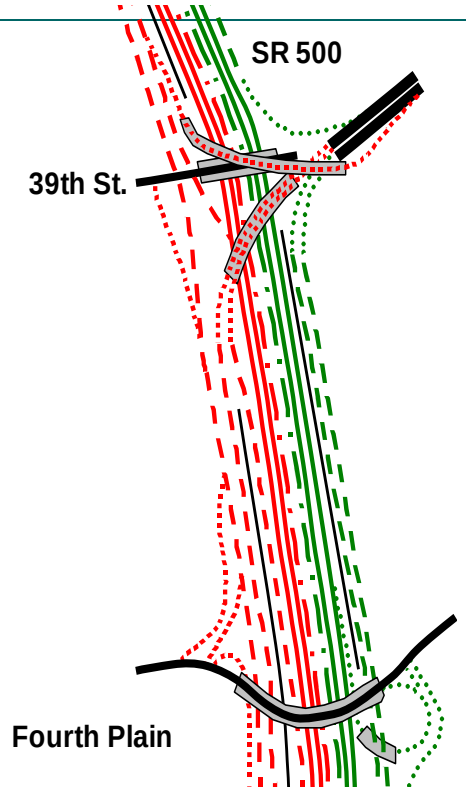


Providing for weaving and merging means adding lanes in some locations

Example: SR 500 - 4th Plain



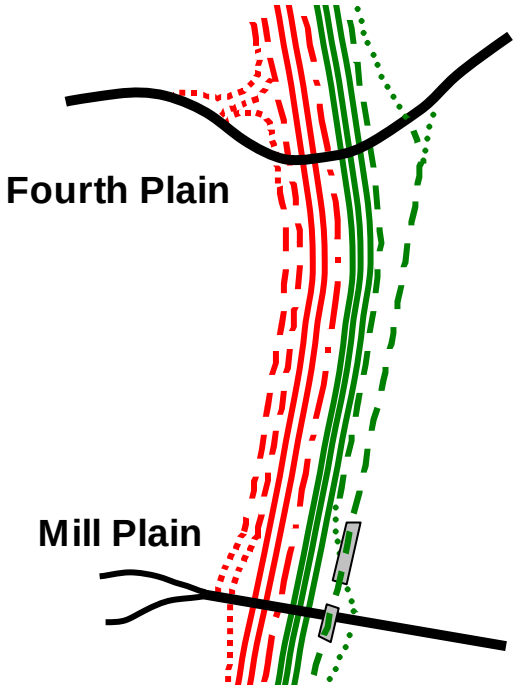
Existing - 6 through, 3 aux lanes

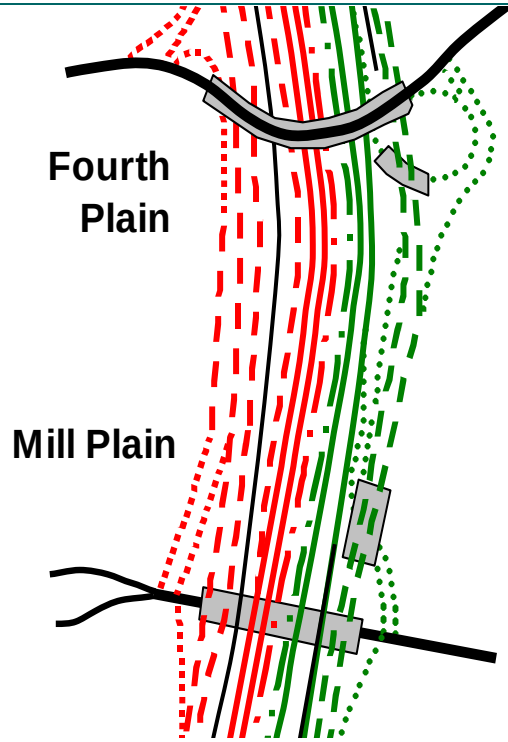


Concept: 6 through, 5-6 aux lanes

Providing for weaving and merging means adding lanes in some locations

Example: 4th Plain - Mill Plain



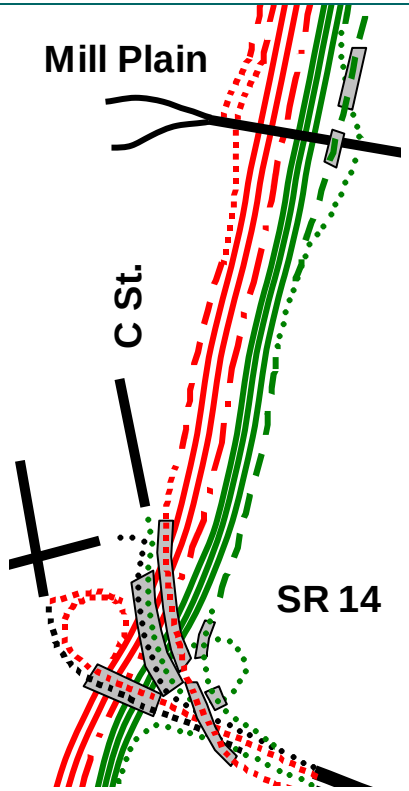


Existing - 6 through, 4 aux lanes

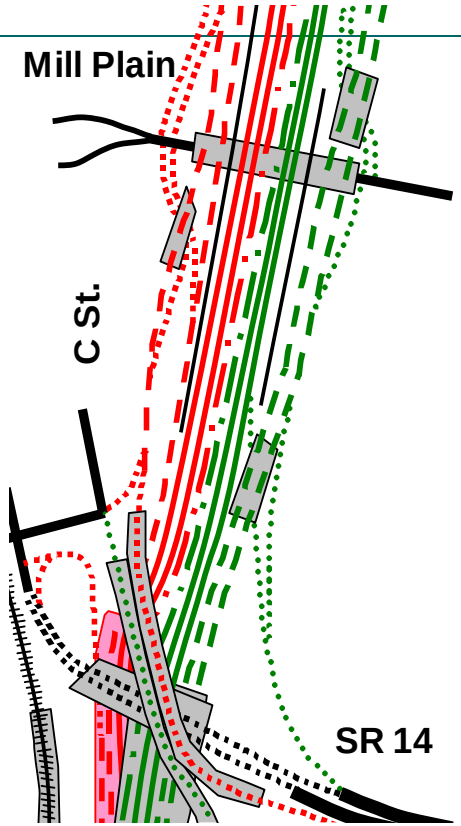
Concept: 6 through, 6-8 aux lanes

Providing for weaving and merging means adding lanes in some locations

Example: Mill Plain - SR 14



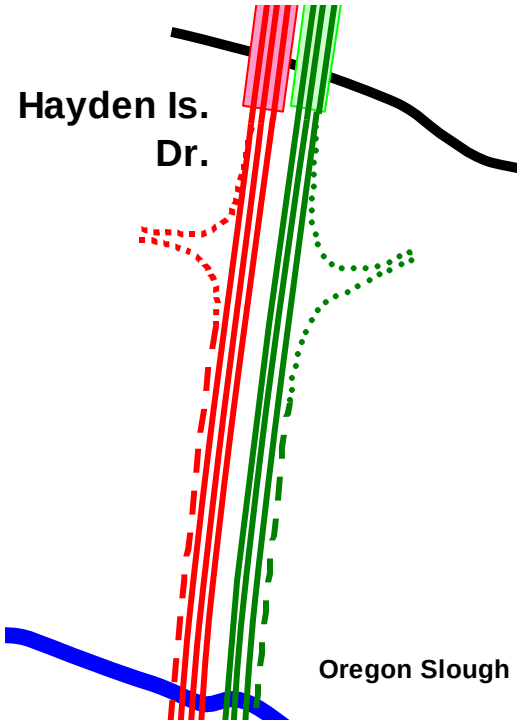
Existing - 6 through, 2 aux lanes

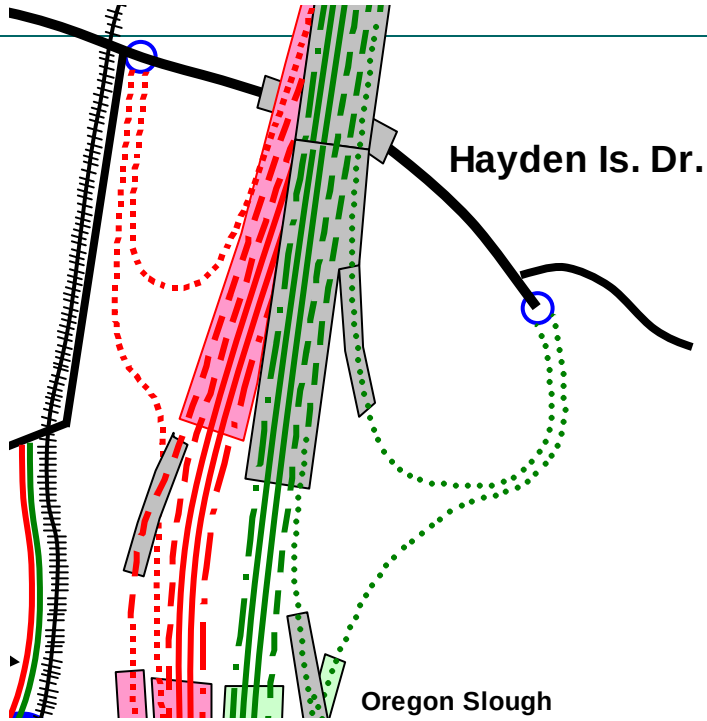


Concept: 6 through, 4-6 aux lanes

Providing for weaving and merging means adding lanes in some locations

Example: Hayden Island



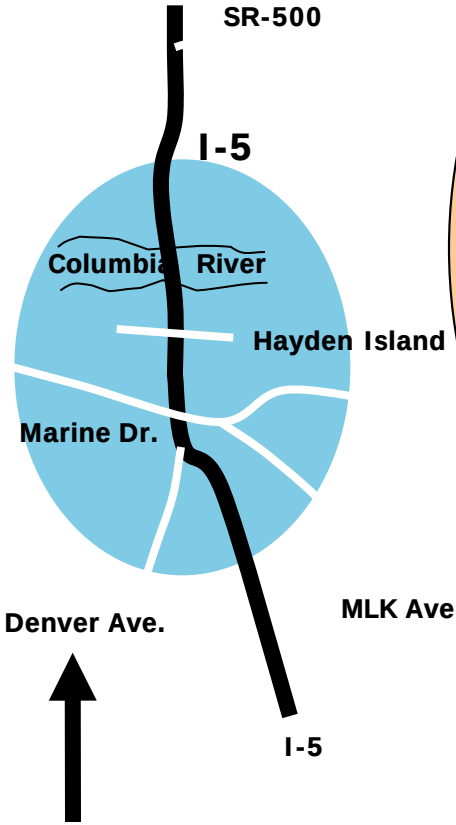


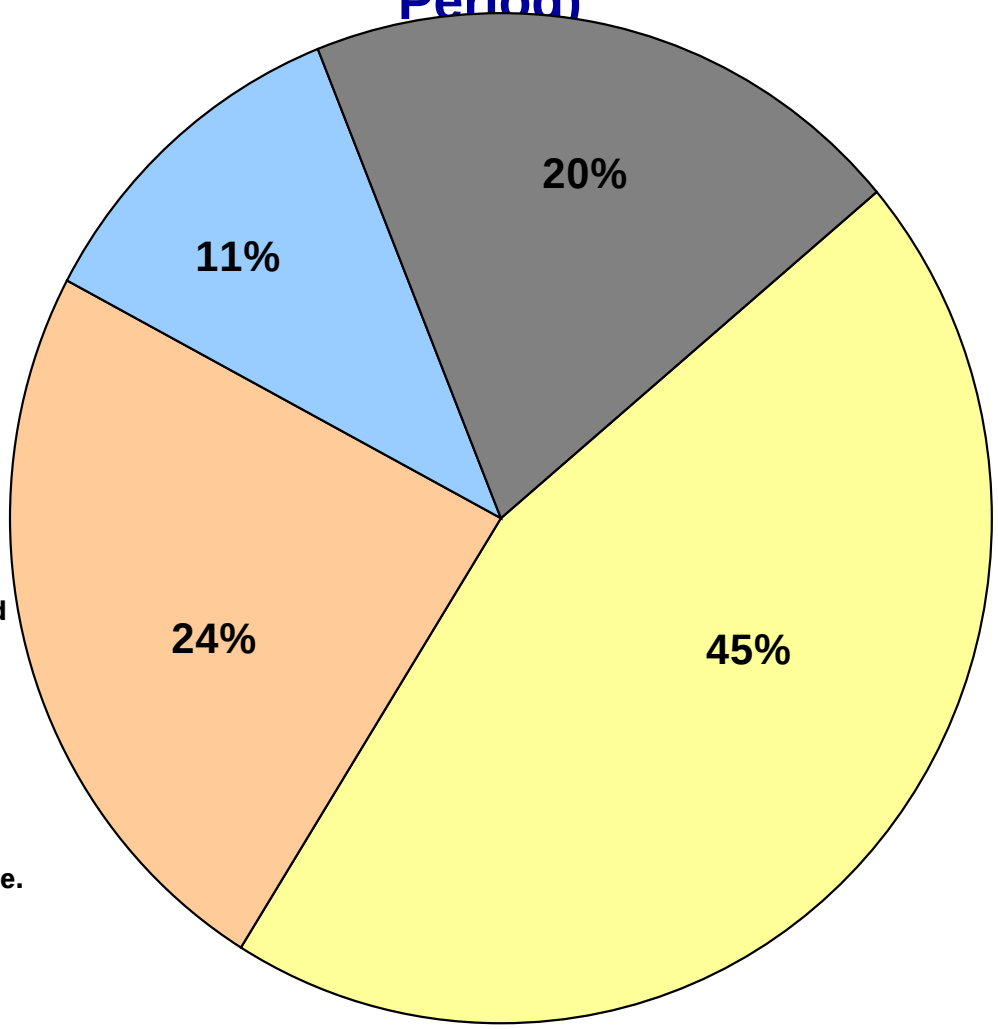
Existing - 6 through, 2 aux lanes

Concept: 6 through, 4-6 aux lanes

Where are Trips Coming From in Portland?

Northbound traveling to I-5 Columbia River Bridge (PM Peak Period)

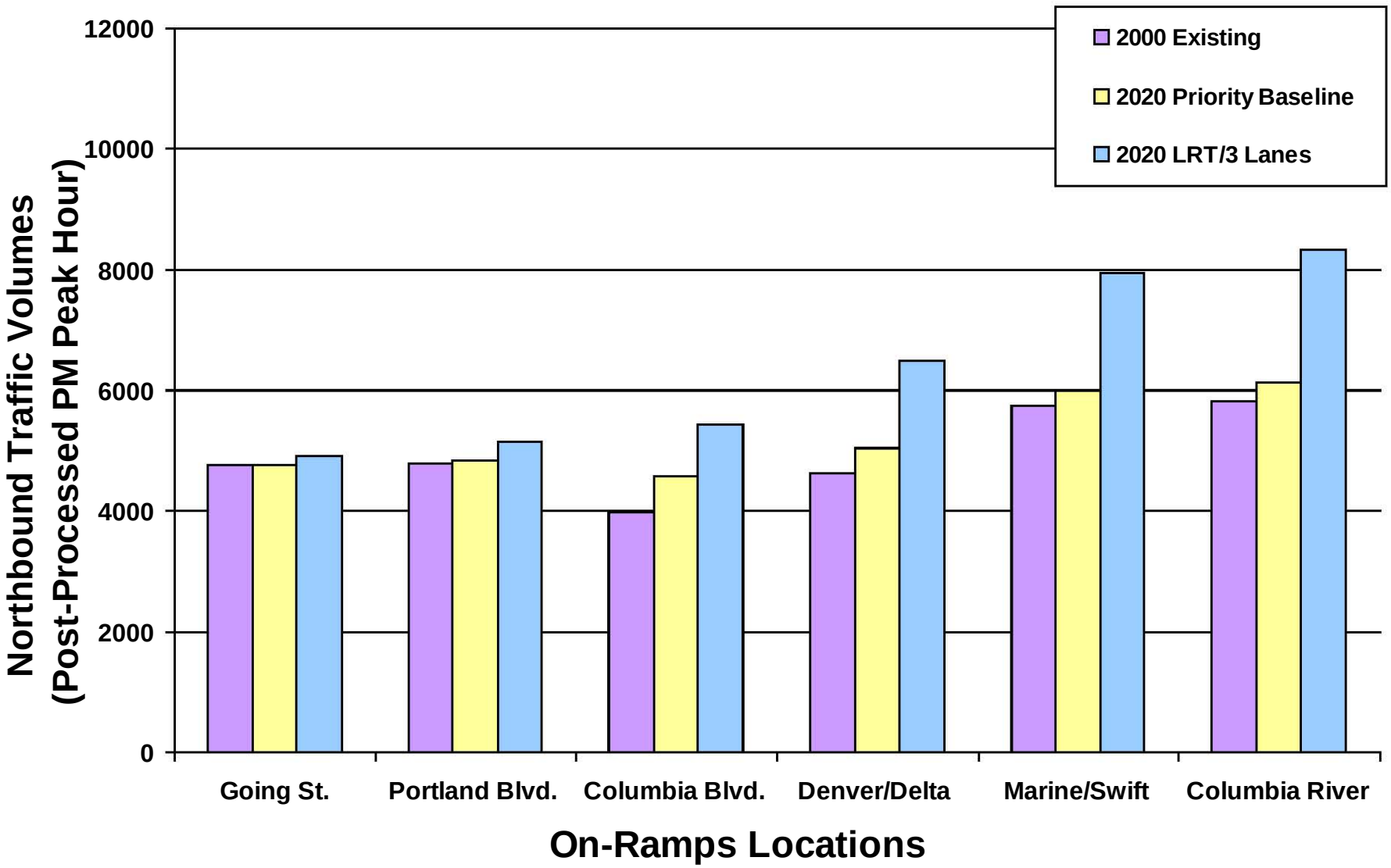




- I-5: Traffic already on I-5 (N of Columbia)
- Denver Ave. (N of Columbia)
- MLK Blvd. (N of Columbia)
- Other Roads: Marine Dr., Hayden Island, etc.

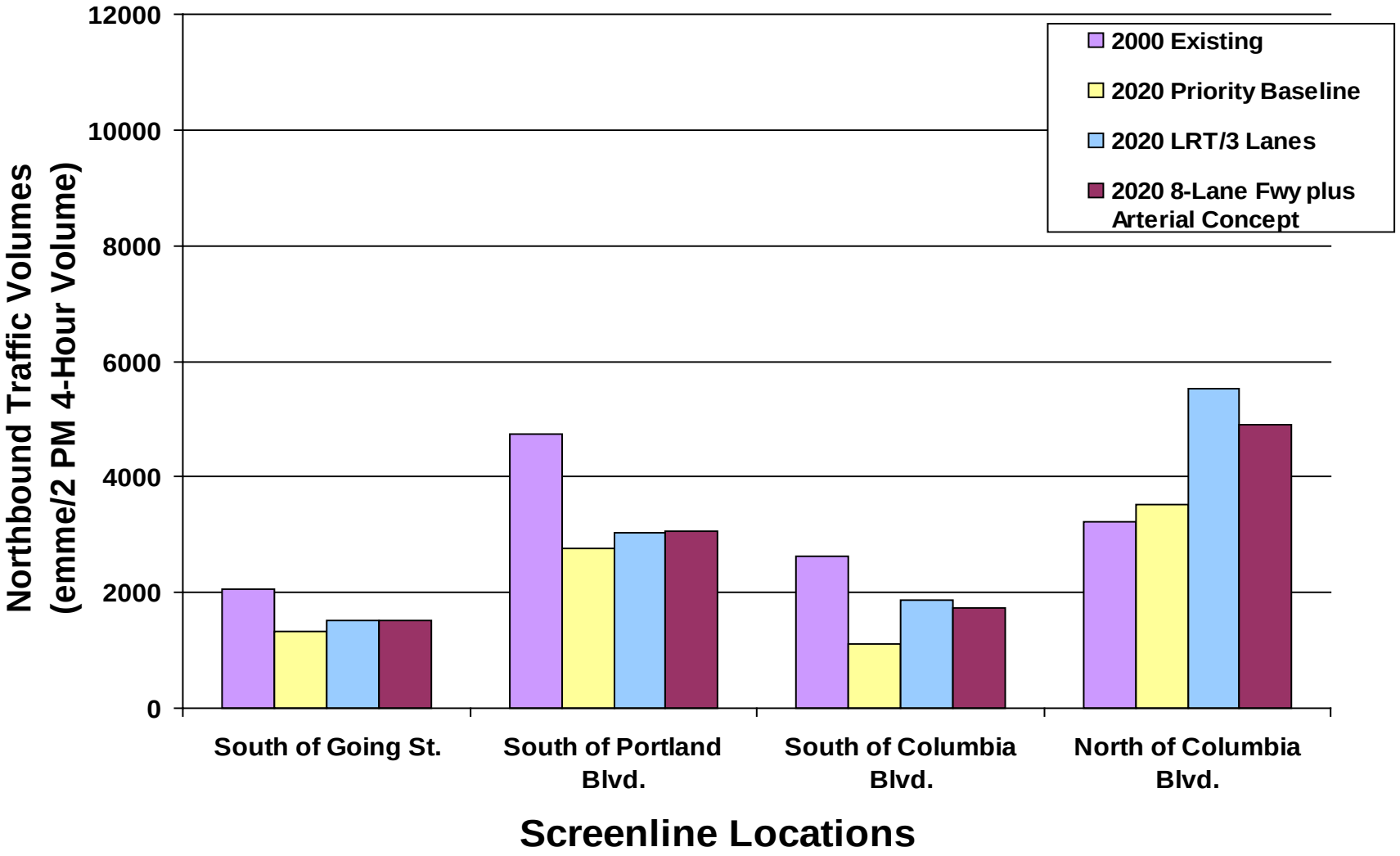
I-5 Travel Volumes in Portland

Northbound (PM Peak Hour)



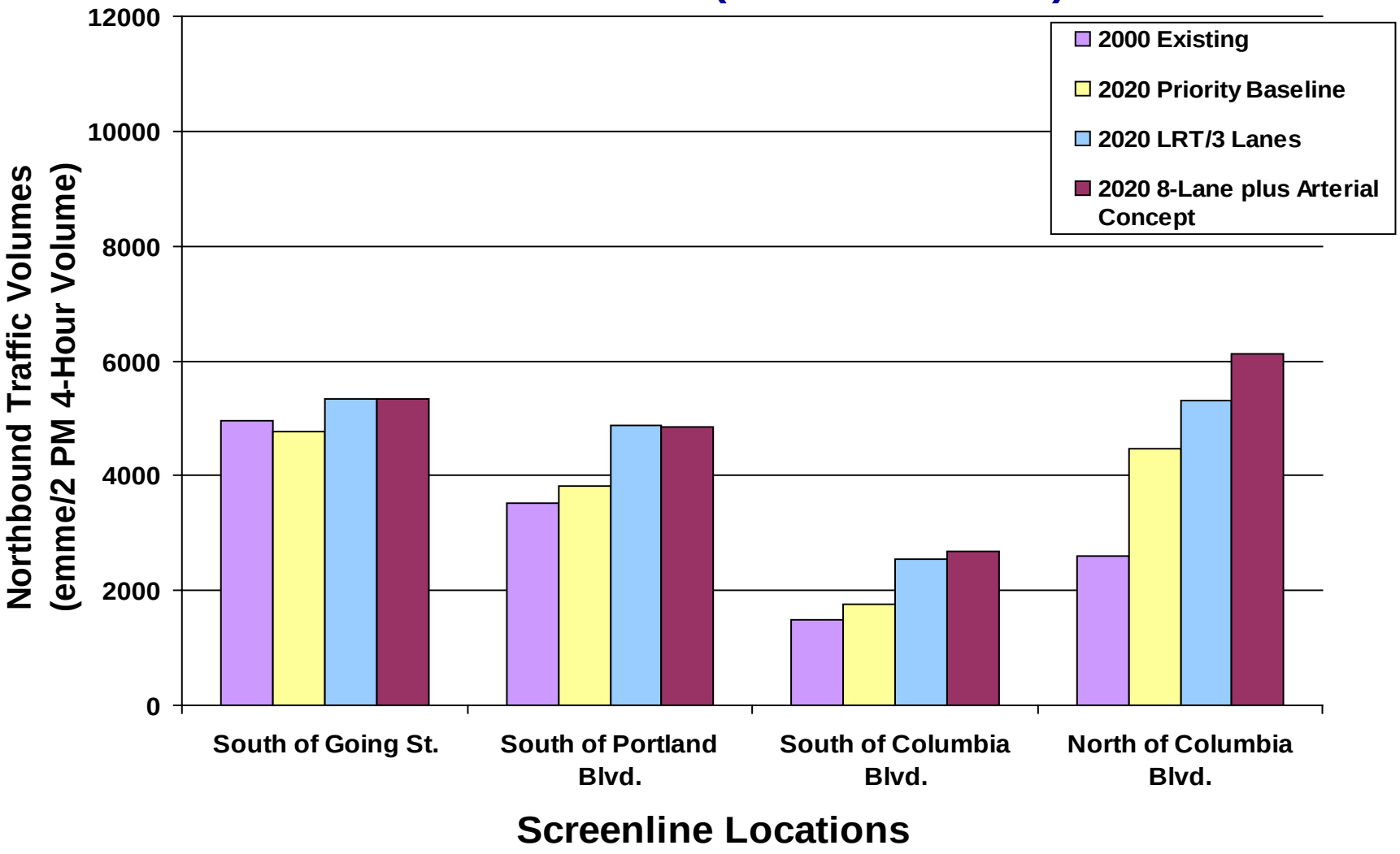
Denver/Interstate Corridor Volumes

Northbound (PM Peak Period)



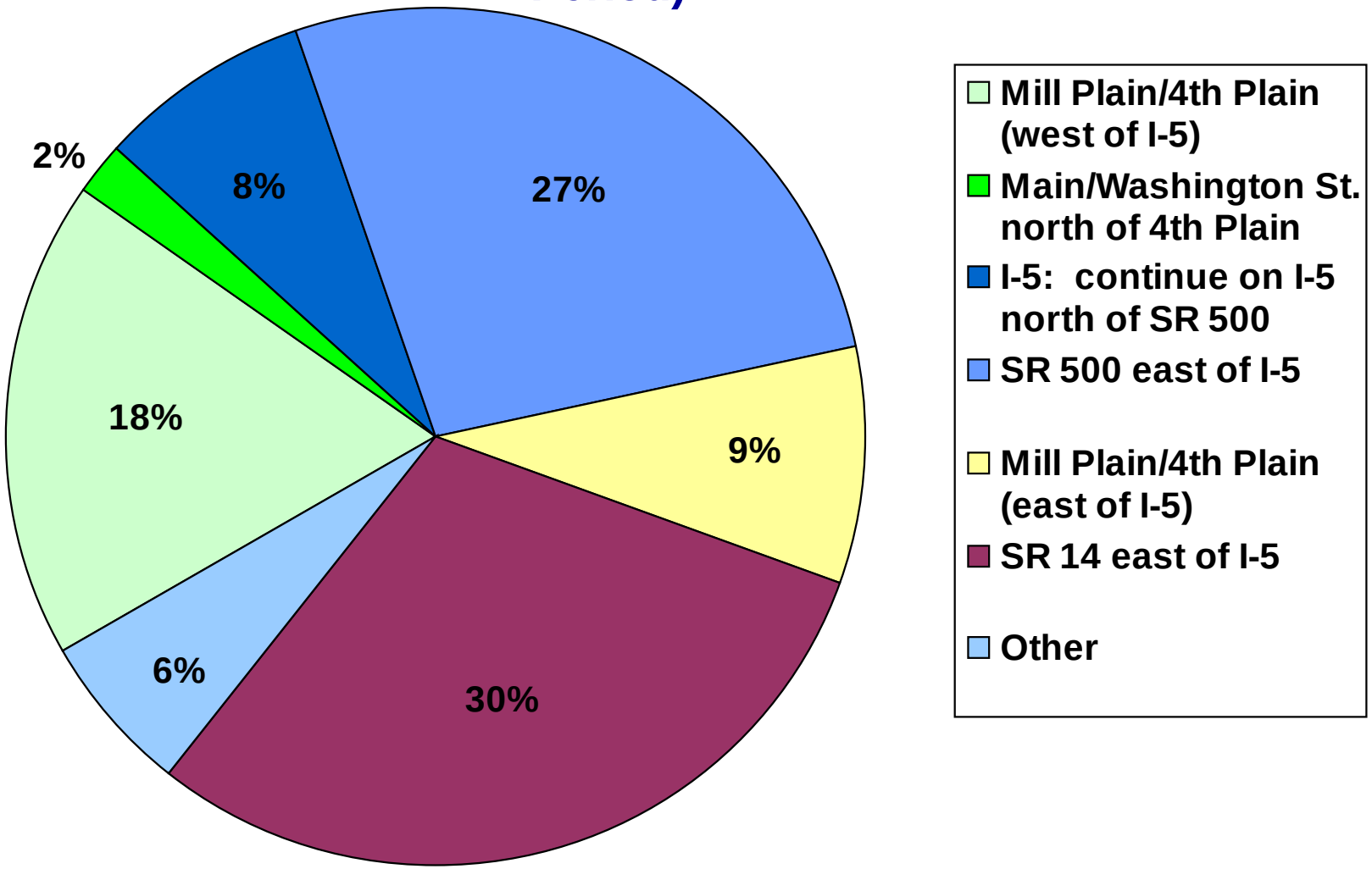
Martin Luther King Blvd. Corridor Volumes

Northbound (PM Peak Period)



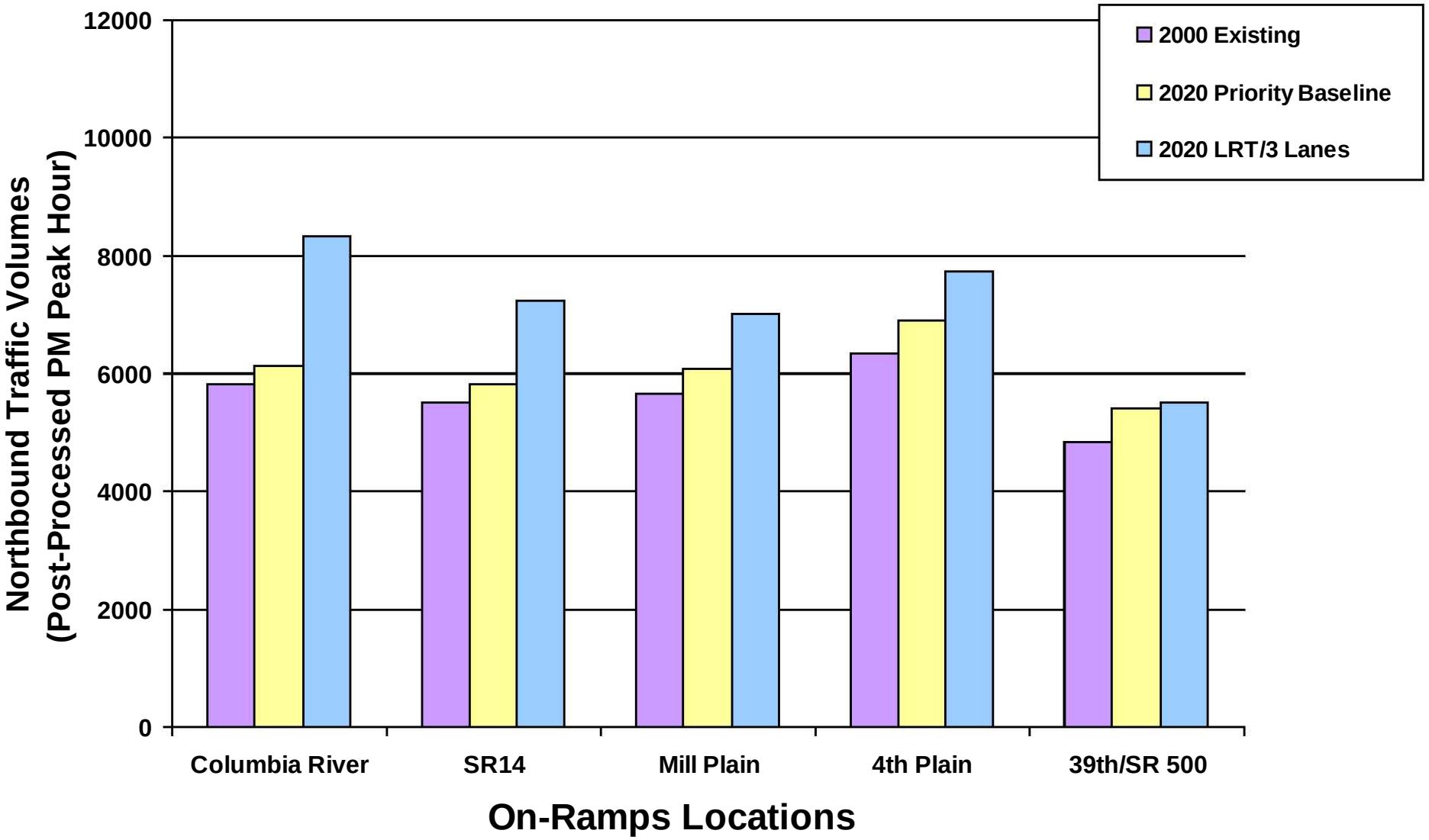
Where are Trips going to in Vancouver?

Northbound traveling to I-5 Columbia River Bridge (PM Peak Period)



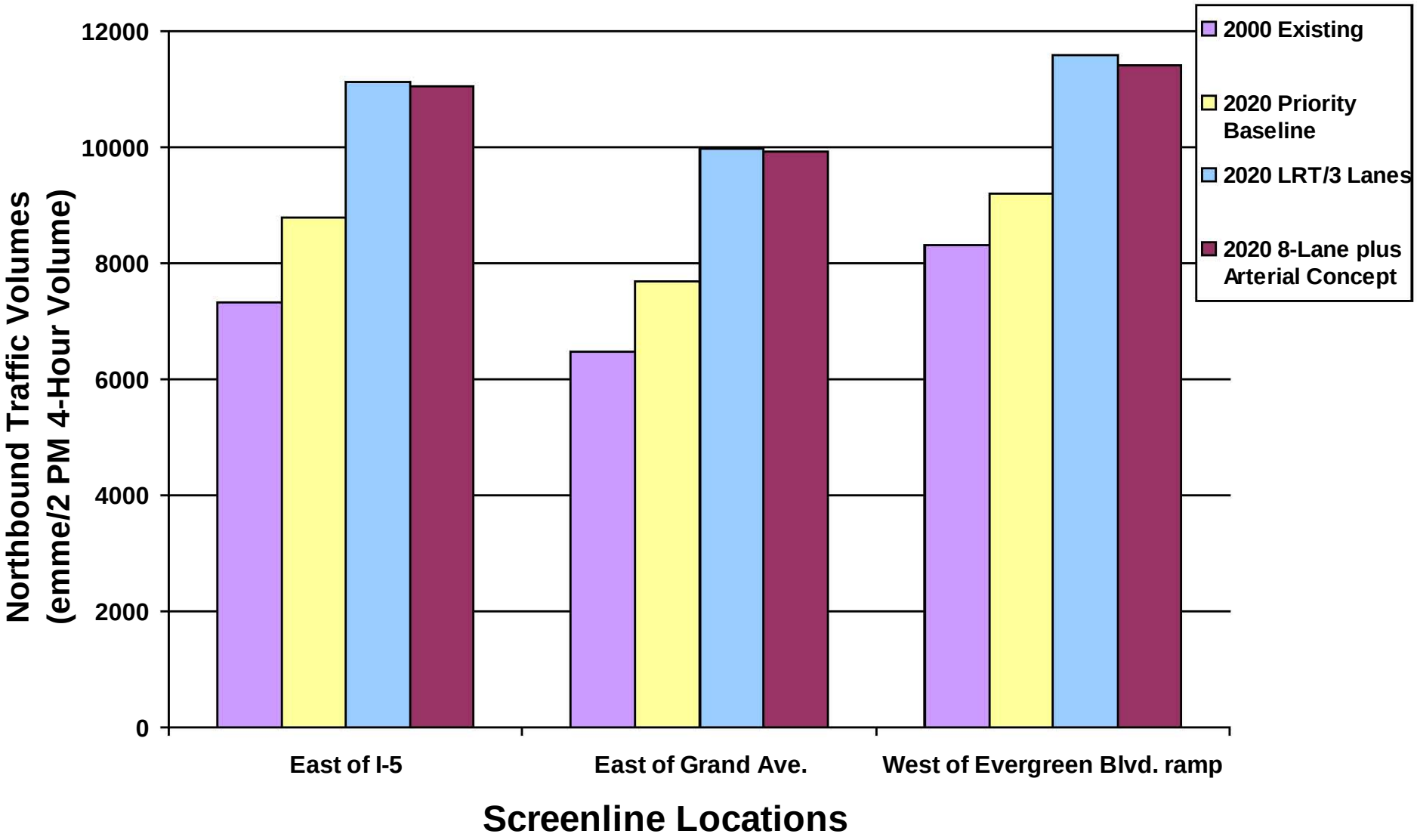
I-5 Traffic Volumes in Vancouver

Northbound (PM Peak Hour)



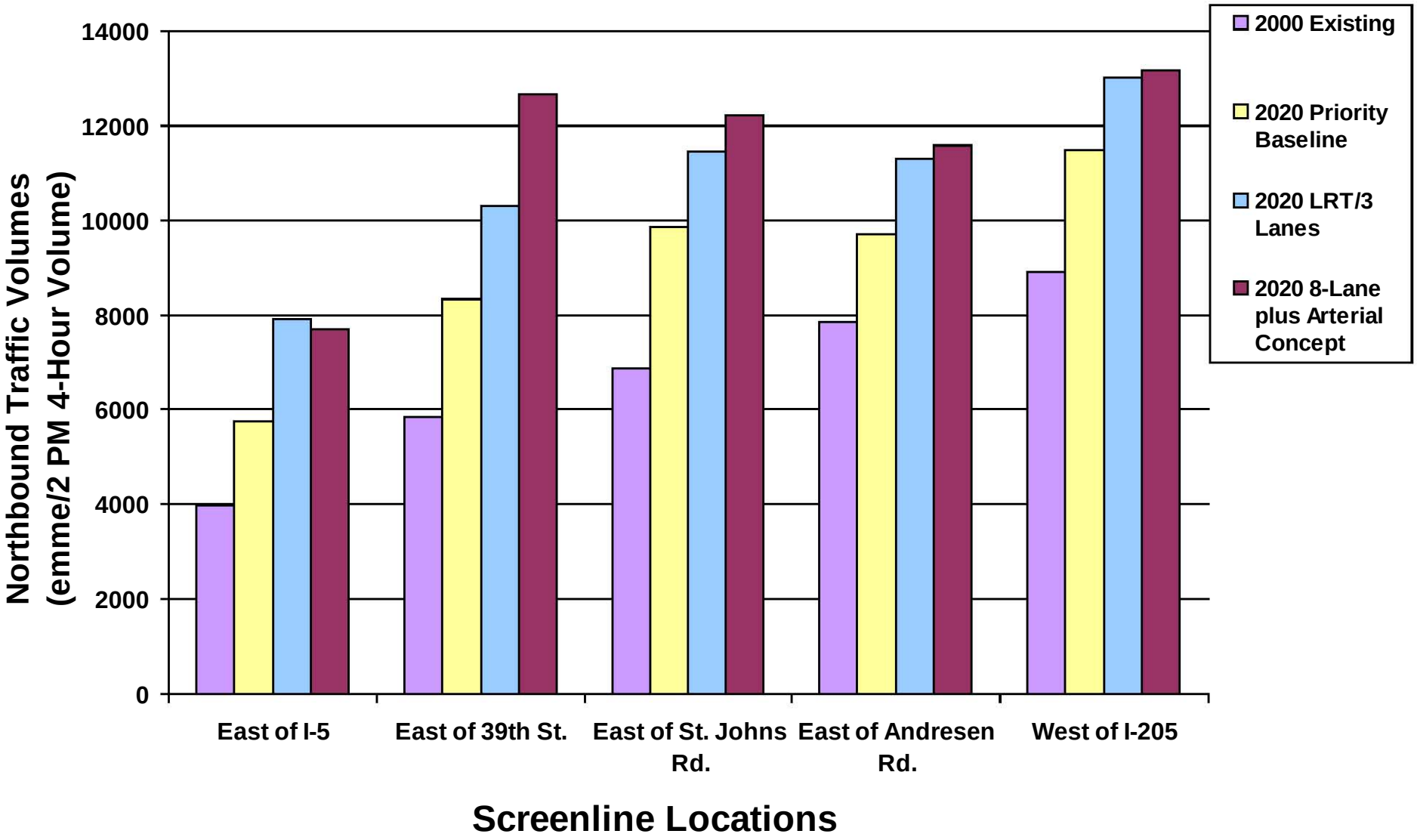
SR 14 Volumes

(PM Peak Period)



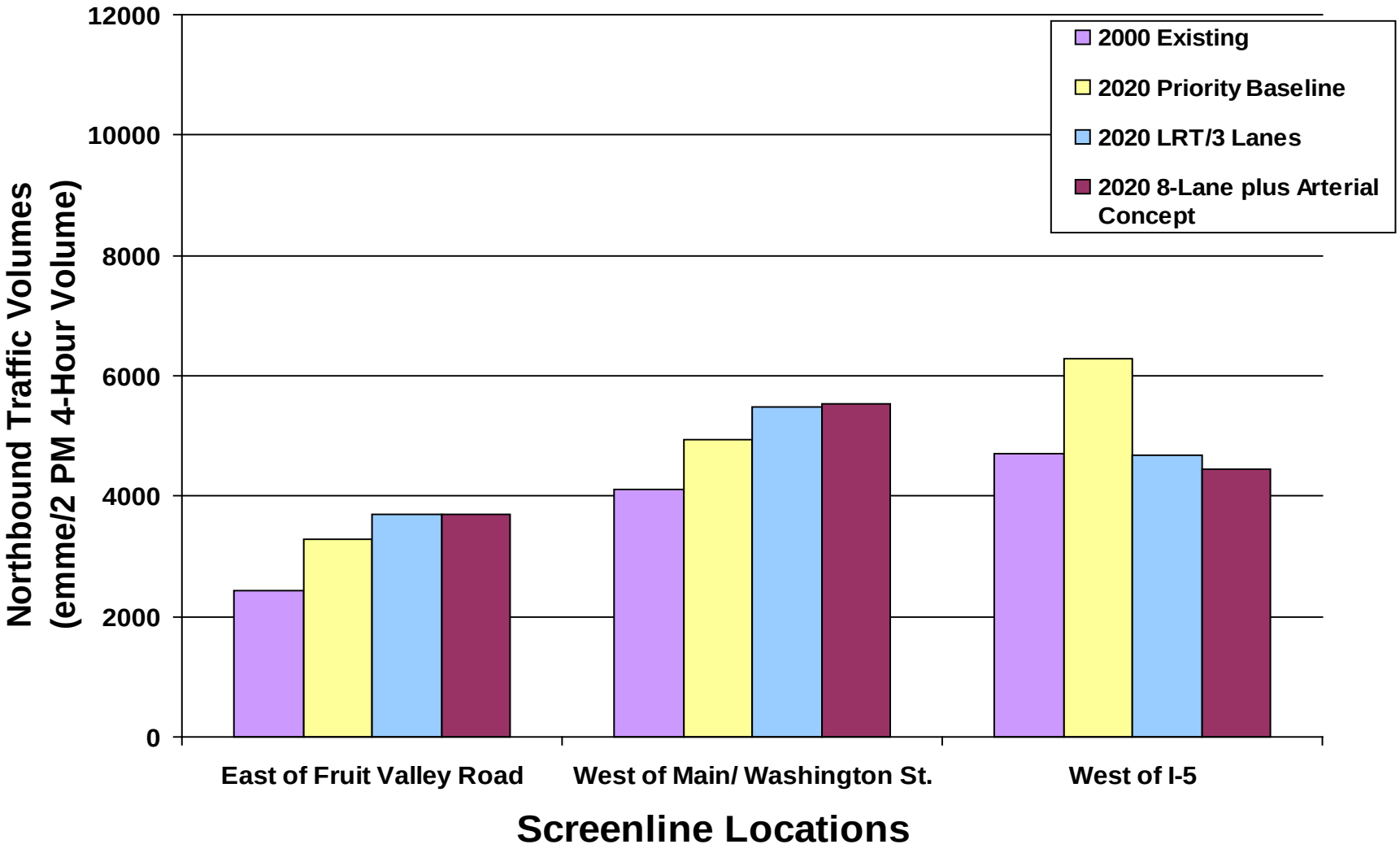
SR 500 Travel Volumes

(East of I-5 - PM Peak Period)



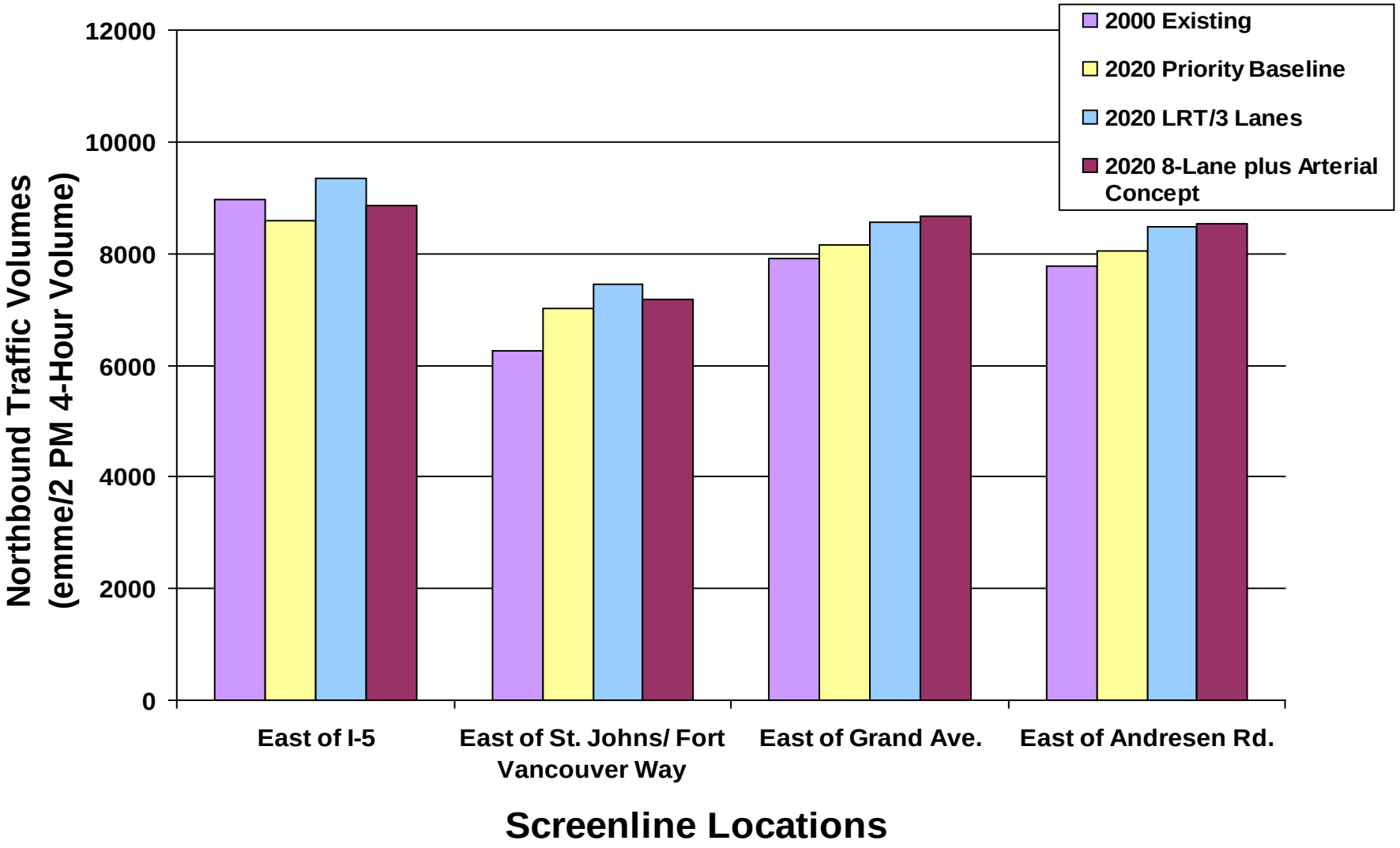
Mill Plain/4th Plain Blvd. Volumes

West of I-5 (Northbound, PM Peak Period)



Mill Plain/4th Plain Blvd. Volumes

East of I-5 (Northbound, PM Peak Period)



Columbia/Washington Corridor Volumes

Northbound (PM Peak Period)