

Option Package No. 14

Columbia River Crossing with New Freeway Bridge or Tunnel

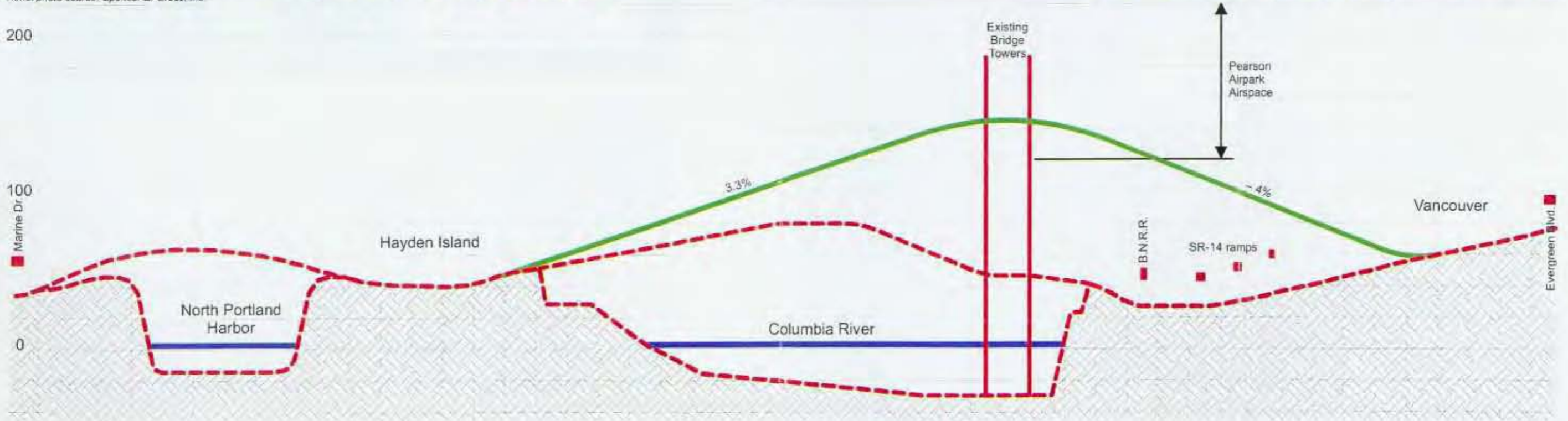


Aerial photo source: Spencer B. Gross, Inc.

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100

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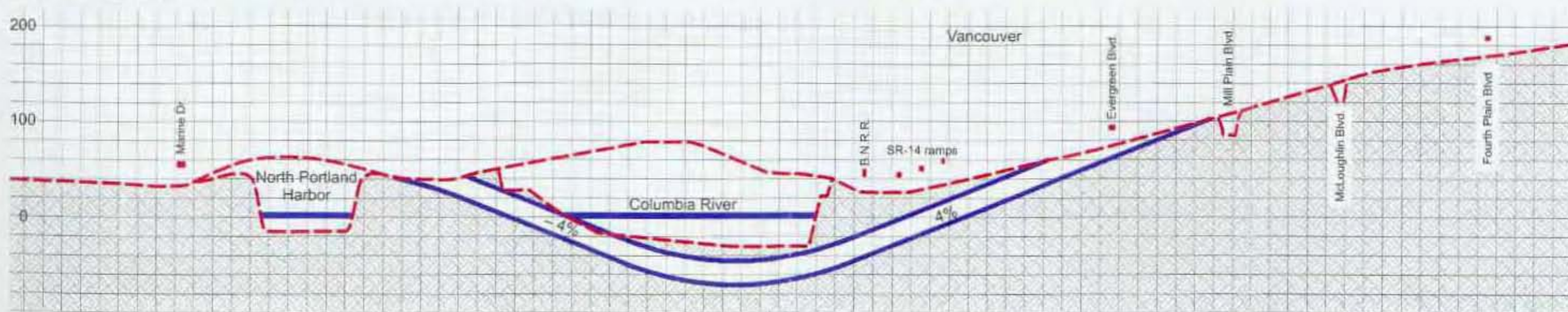
A. High-Level Bridge

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Aerial photo source: Spencer B. Gross, Inc.



B. Short Tunnel Option (Immersed Tube)

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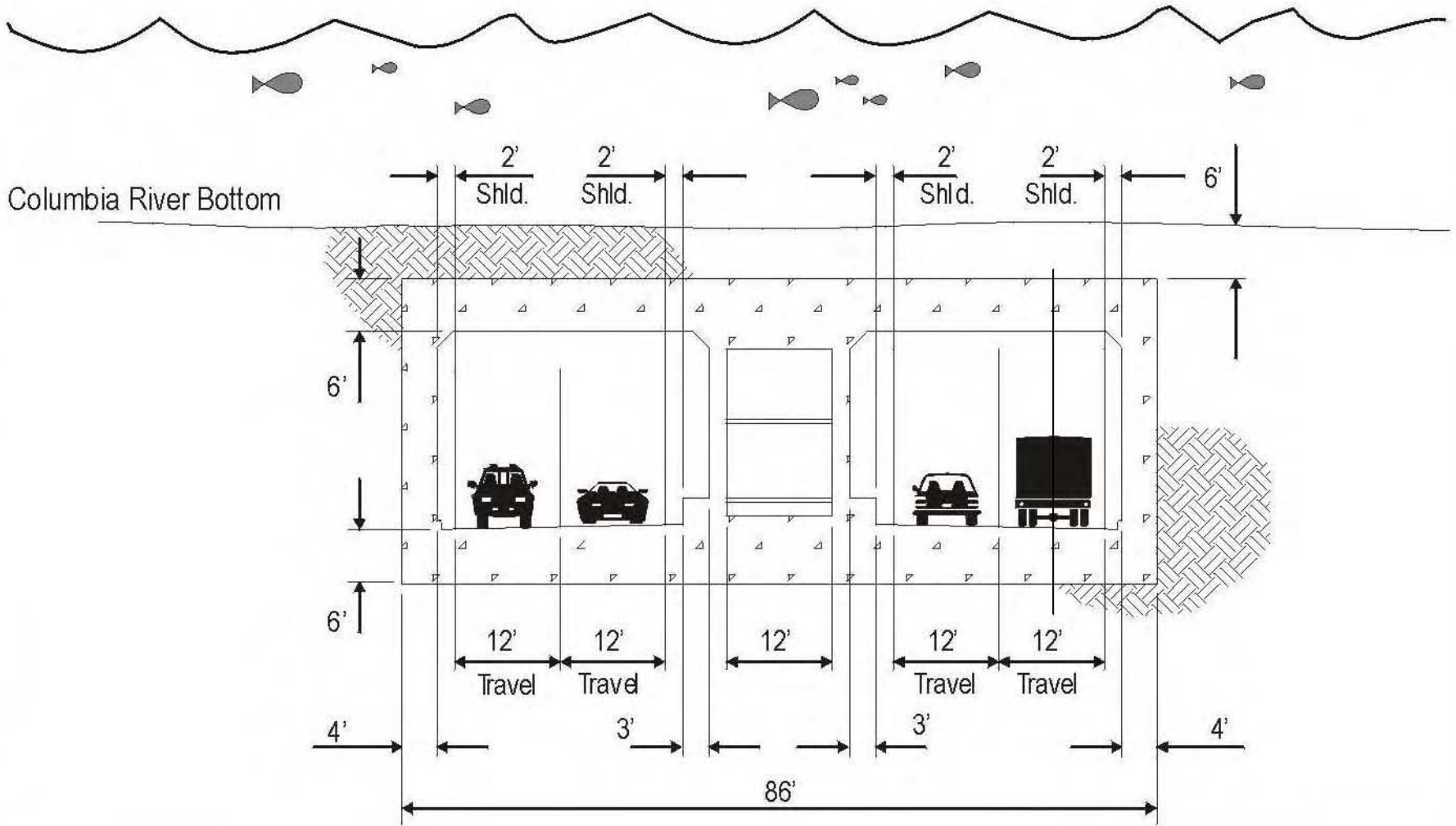


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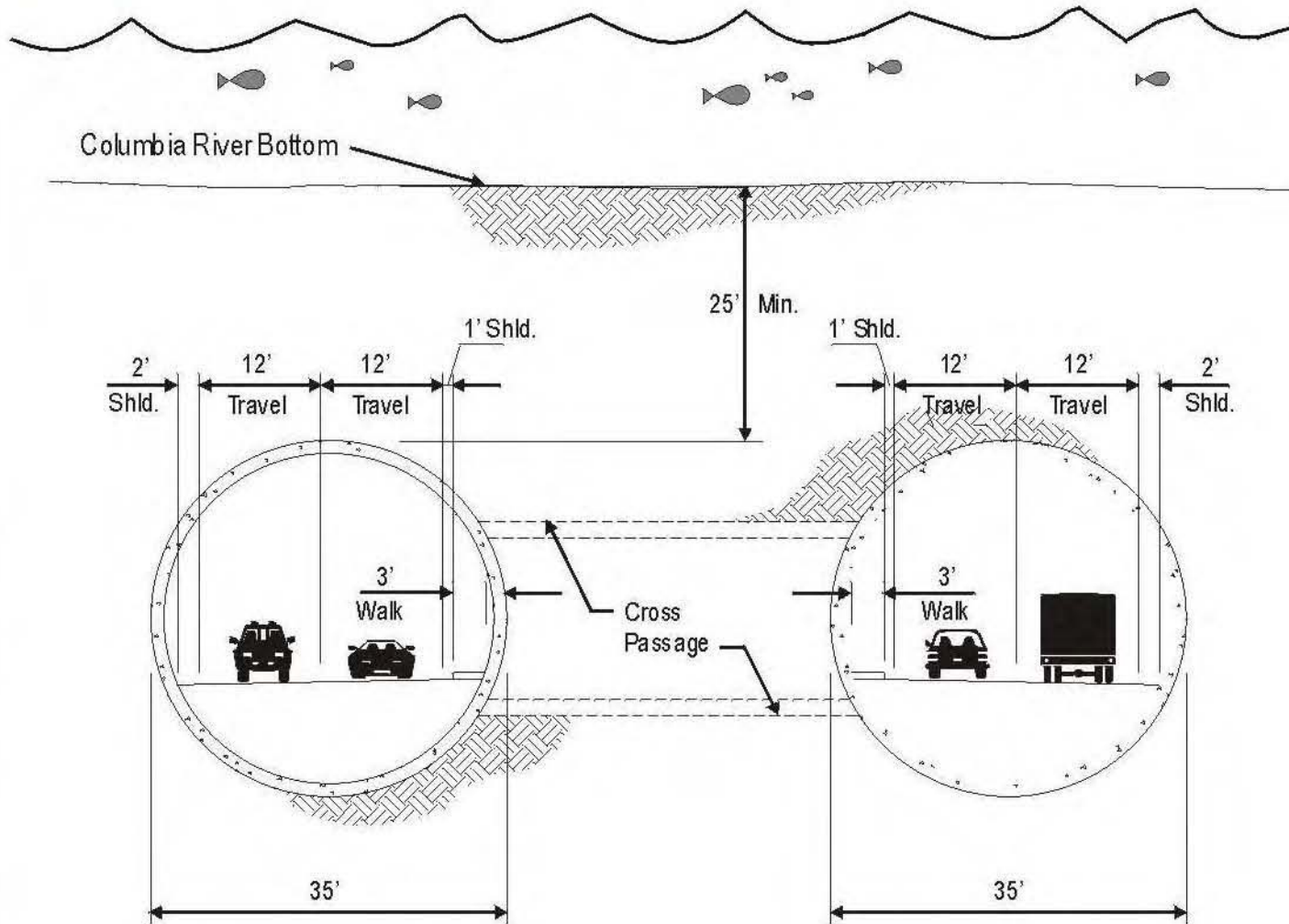


C. Long Tunnel Option (Bored)

Immersed-tube tunnel lane configuration



Bored tunnel lane configuration

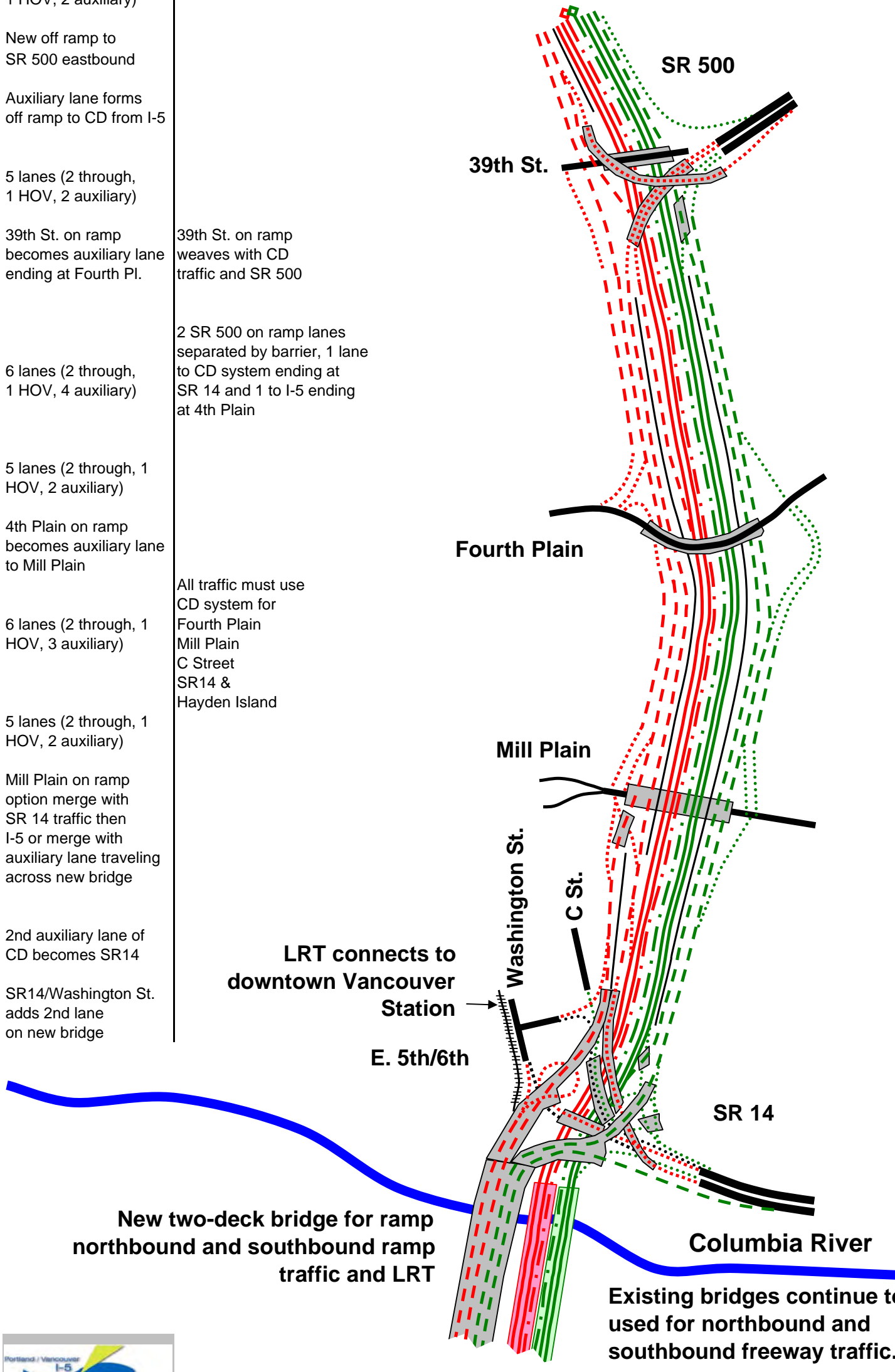


Southbound

Northbound

Characteristics	Movements Allowed
5 lanes (2 through, 1 HOV, 2 auxiliary)	
New off ramp to SR 500 eastbound	
Auxiliary lane forms off ramp to CD from I-5	
5 lanes (2 through, 1 HOV, 2 auxiliary)	
39th St. on ramp becomes auxiliary lane ending at Fourth Pl.	39th St. on ramp weaves with CD traffic and SR 500
6 lanes (2 through, 1 HOV, 4 auxiliary)	2 SR 500 on ramp lanes separated by barrier, 1 lane to CD system ending at SR 14 and 1 to I-5 ending at 4th Plain
5 lanes (2 through, 1 HOV, 2 auxiliary)	
4th Plain on ramp becomes auxiliary lane to Mill Plain	
6 lanes (2 through, 1 HOV, 3 auxiliary)	All traffic must use CD system for Fourth Plain Mill Plain C Street SR14 & Hayden Island
5 lanes (2 through, 1 HOV, 2 auxiliary)	
Mill Plain on ramp option merge with SR 14 traffic then I-5 or merge with auxiliary lane traveling across new bridge	
2nd auxiliary lane of CD becomes SR14	
SR14/Washington St. adds 2nd lane on new bridge	

Characteristics	Movements Allowed
5 lanes(2 through, 1 HOV, 2 auxiliary)	New on ramp from SR 500 to I-5 north
	No access provided to 39th St
1st auxiliary lane becomes SR 500 and 2nd auxiliary lane becomes auxiliary lane on I-5	Direct access from I-5 to SR 500 forms 2nd lane of SR 500
5 lanes (2 through, 1 HOV, 2 auxiliary)	
Fourth Plain merges to auxiliary lanes	
6 lanes (2 through, 1 HOV, 3 auxiliary)	Access provided from Mill Plain to 4th Plain
Mill Plain on ramp becomes auxiliary lane to 4th Plain	
	Remaining auxiliary lane forms 1 lane of CD with 2nd lane exiting from mainline
	All traffic must use CD system for Mill Plain & Fourth Plain
SR14 on ramp choice of CD or I-5	
Off ramp to C St	
Off ramp to SR14 from mainline and new bridge	
5 lanes(2 through,1 HOV, 2 auxiliary)	



I-5 Transportation and Trade Partnership
 Bridge Influence Area Analysis
 Vancouver Freeway and Interchanges with Bridge Concept 6

REVISED 4/17/2002
Not to Scale

Key:

- Southbound = Red
- HOV Lane
- Through lane
- Auxiliary lane
- On/off ramp
- Northbound = Green
- HOV Lane
- Through lane
- Auxiliary lane
- On/off ramp
- Local Street
- Signal
- Light Rail Tracks
- Barrier
- Structures
- CD = Collector-Distributor Lane

New two-deck bridge for northbound and southbound ramp traffic and LRT

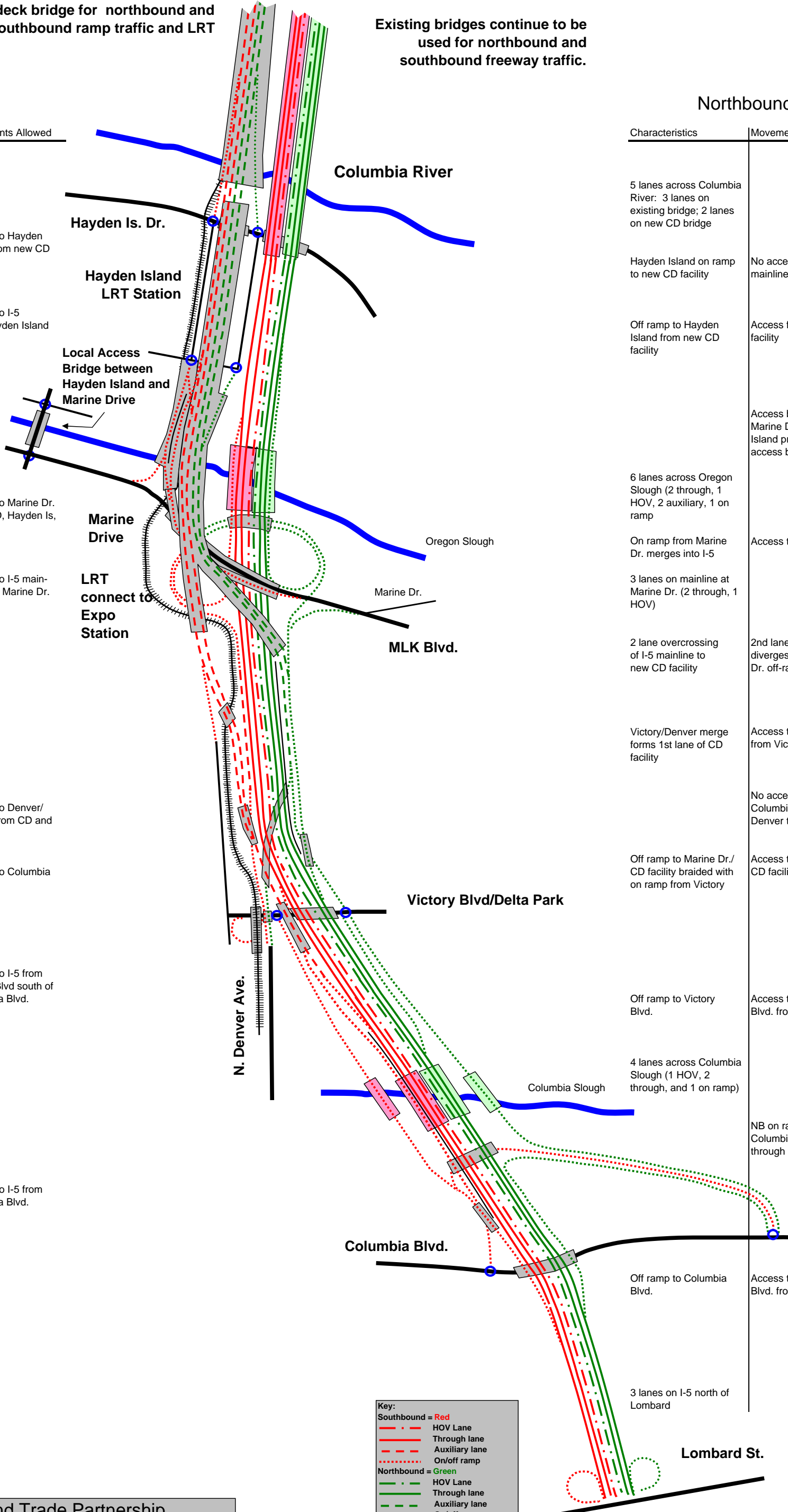
Existing bridges continue to be used for northbound and southbound freeway traffic.

Southbound

Northbound

Characteristics	Movements Allowed
5 lanes across Columbia	
River: 2 lanes on new CD bridge; 3 lanes on existing bridge	
Off ramp to Hayden Island	Access to Hayden Island from new CD bridge
Hayden Island on ramp choice of CD facility to Marine Dr. or I-5	Access to I-5 from Hayden Island
8 lanes across Oregon Slough (2 through, 1 HOV, 2 auxiliary, and 3 off ramps)	
New CD facility fly-over Marine Dr. interchange	
Marine Dr. off ramp from C-D or I-5	Access to Marine Dr. from C-D, Hayden Is, and I-5
Marine Dr. on ramp to I-5 mainline adds as auxiliary lane	Access to I-5 mainline from Marine Dr.
Outside CD lane exits to Denver/Victory as well as auxiliary lane from Marine Dr.	Access to Denver/Victory from CD and I-5
Off ramp to Columbia Blvd. prior to Victory Blvd. is braided with Victory/Columbia Blvd. off ramp	Access to Columbia Blvd.
2nd CD lane merges with I-5 south of Victory Blvd.	
Victory on ramp travels parallel to I-5	Access to I-5 from Victory Blvd south of Columbia Blvd.
5 lanes across Columbia Slough (2 through, 1 HOV, and 2 on/off ramps)	
Victory on ramp to I-5 SB combines with Columbia Blvd. before merging with I-5 mainline	Access to I-5 from Columbia Blvd.
On ramp from Victory/Columbia merges into 3rd lane on I-5	
3 lanes approaching Lombard	

Characteristics	Movements Allowed
5 lanes across Columbia River: 3 lanes on existing bridge; 2 lanes on new CD bridge	
Hayden Island on ramp to new CD facility	No access NB onto mainline I-5 from H.I.
Off ramp to Hayden Island from new CD facility	Access from CD facility
	Access between Marine Dr. and Hayden Island provided by local access bridge
6 lanes across Oregon Slough (2 through, 1 HOV, 2 auxiliary, 1 on ramp)	
On ramp from Marine Dr. merges into I-5	Access to I-5 mainline
3 lanes on mainline at Marine Dr. (2 through, 1 HOV)	
2 lane overcrossing of I-5 mainline to new CD facility	2nd lane of CD facility diverges from Marine Dr. off-ramp
Victory/Denver merge forms 1st lane of CD facility	Access to CD facility from Victory/Delta
	No access from Columbia/Victory/Denver to Marine Dr.
Off ramp to Marine Dr./CD facility braided with on ramp from Victory	Access to Marine Dr./CD facility from I-5
Off ramp to Victory Blvd.	Access to Victory Blvd. from I-5 mainline
4 lanes across Columbia Slough (1 HOV, 2 through, and 1 on ramp)	
	NB on ramp from Columbia Blvd. through Victory Blvd.
	Access to Columbia Blvd. from I-5 mainline
3 lanes on I-5 north of Lombard	



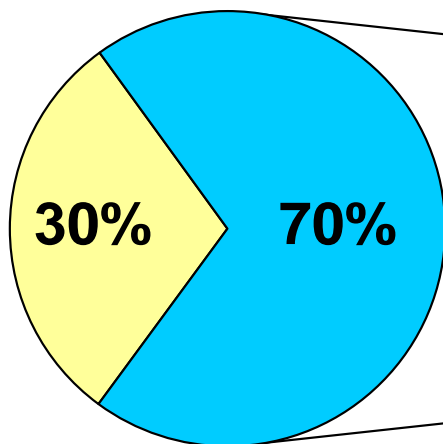
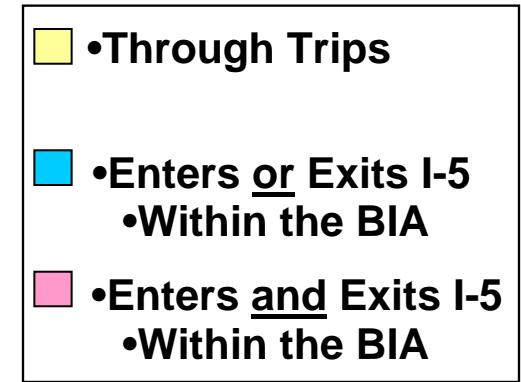
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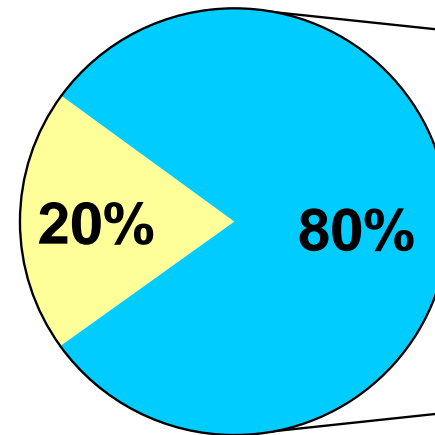
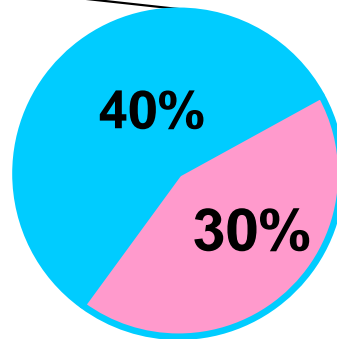


I-5 Columbia River Bridge Traffic

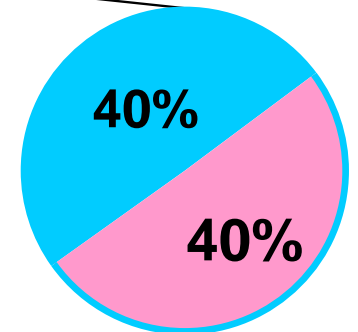
2020 Through Trips vs. Bridge Influence Area Trips



Southbound - AM Peak Period

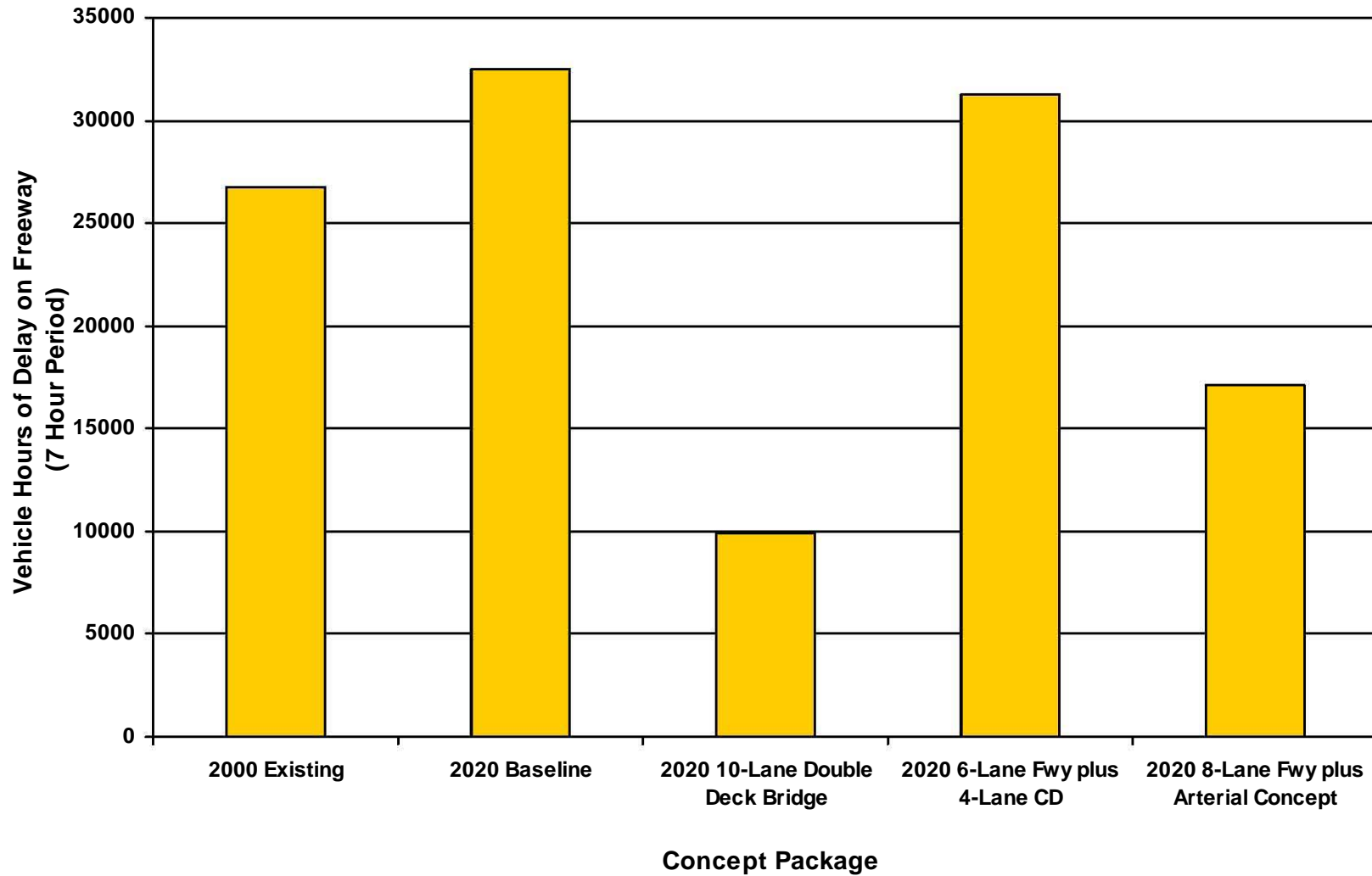


Northbound - PM Peak Period

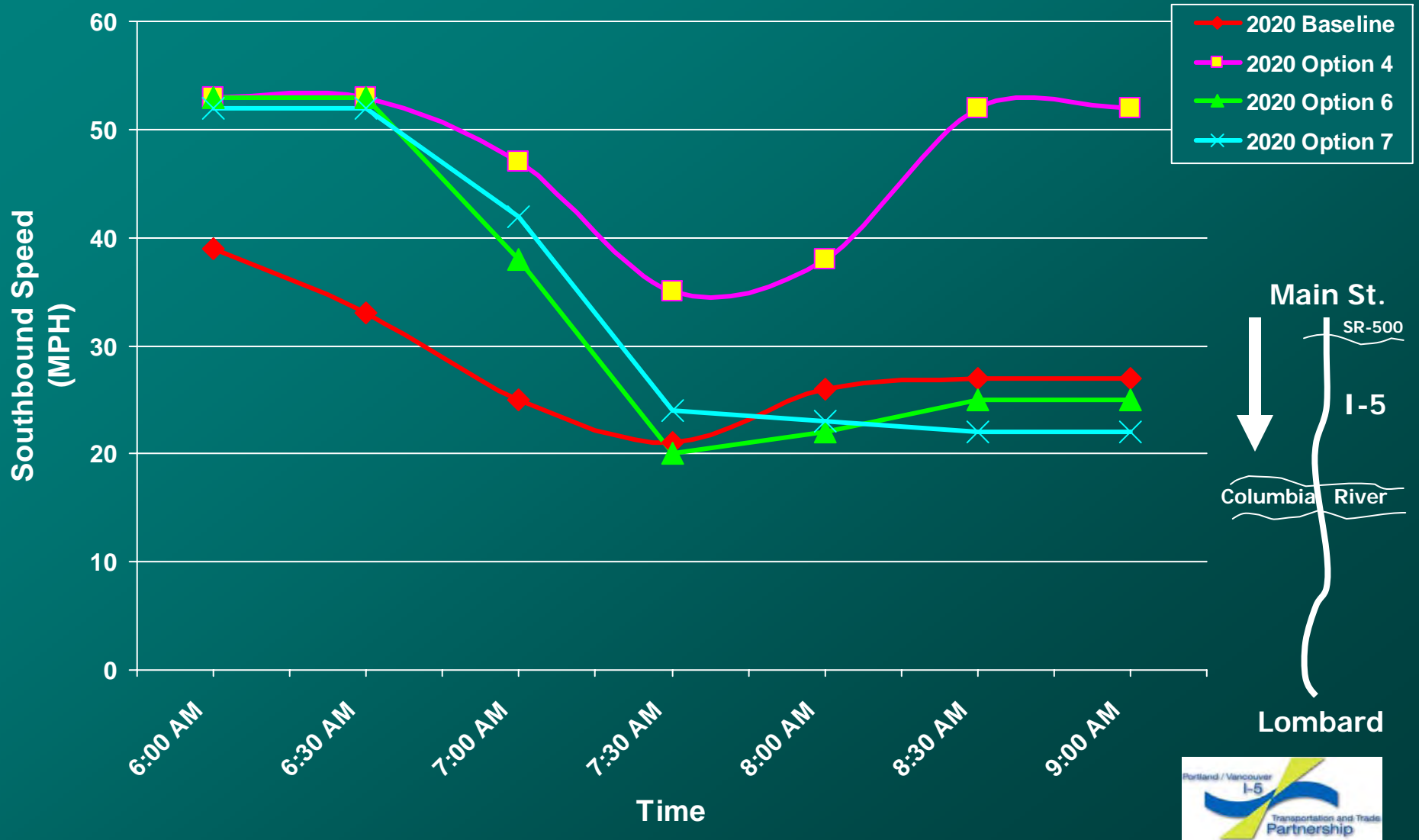


Vehicle Hours of Delay on I-5

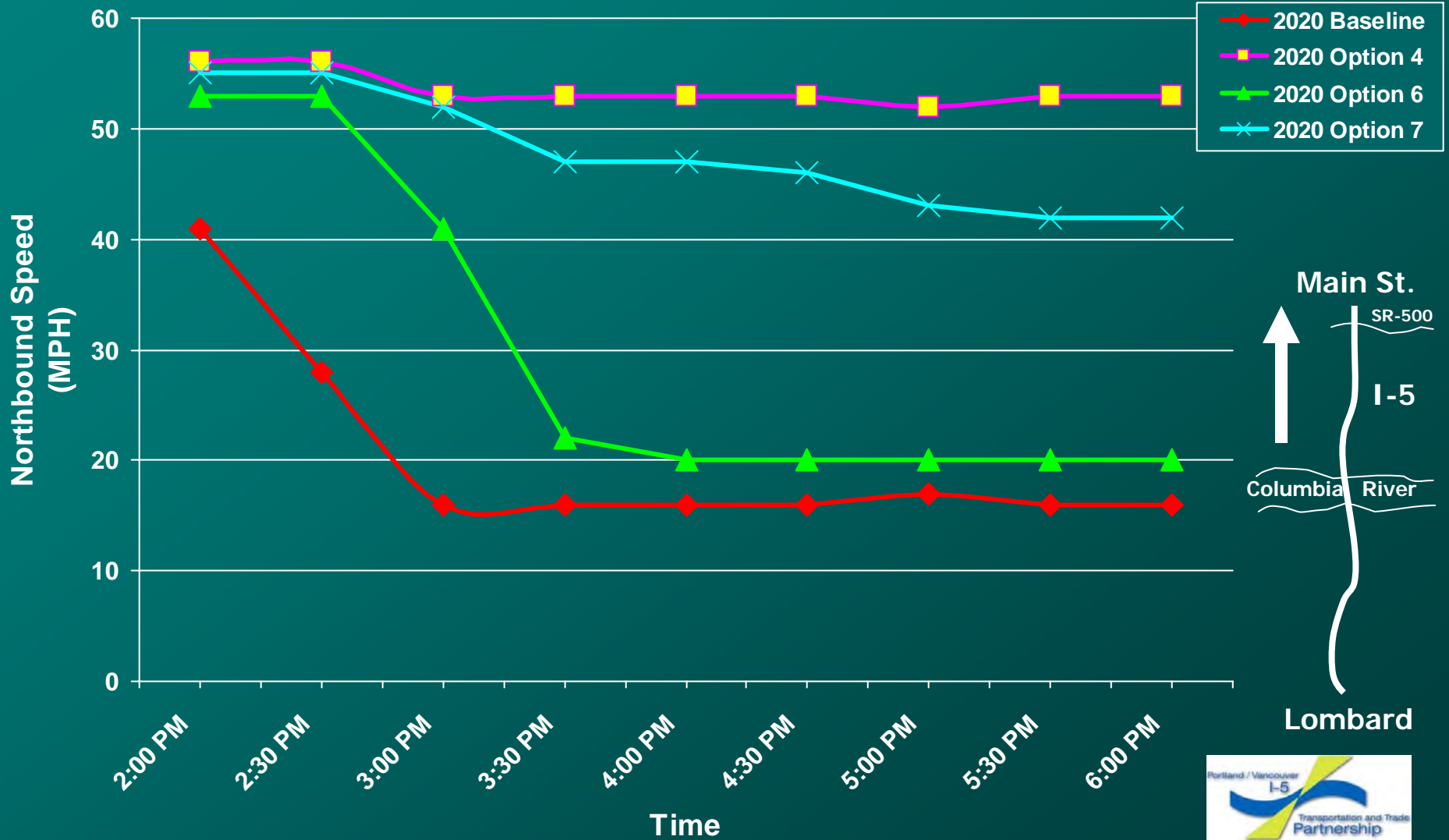
(AM and PM Peak Periods)



Average Speed I-5 Southbound - Main St. to Lombard

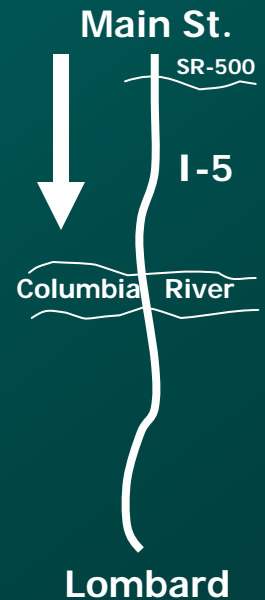
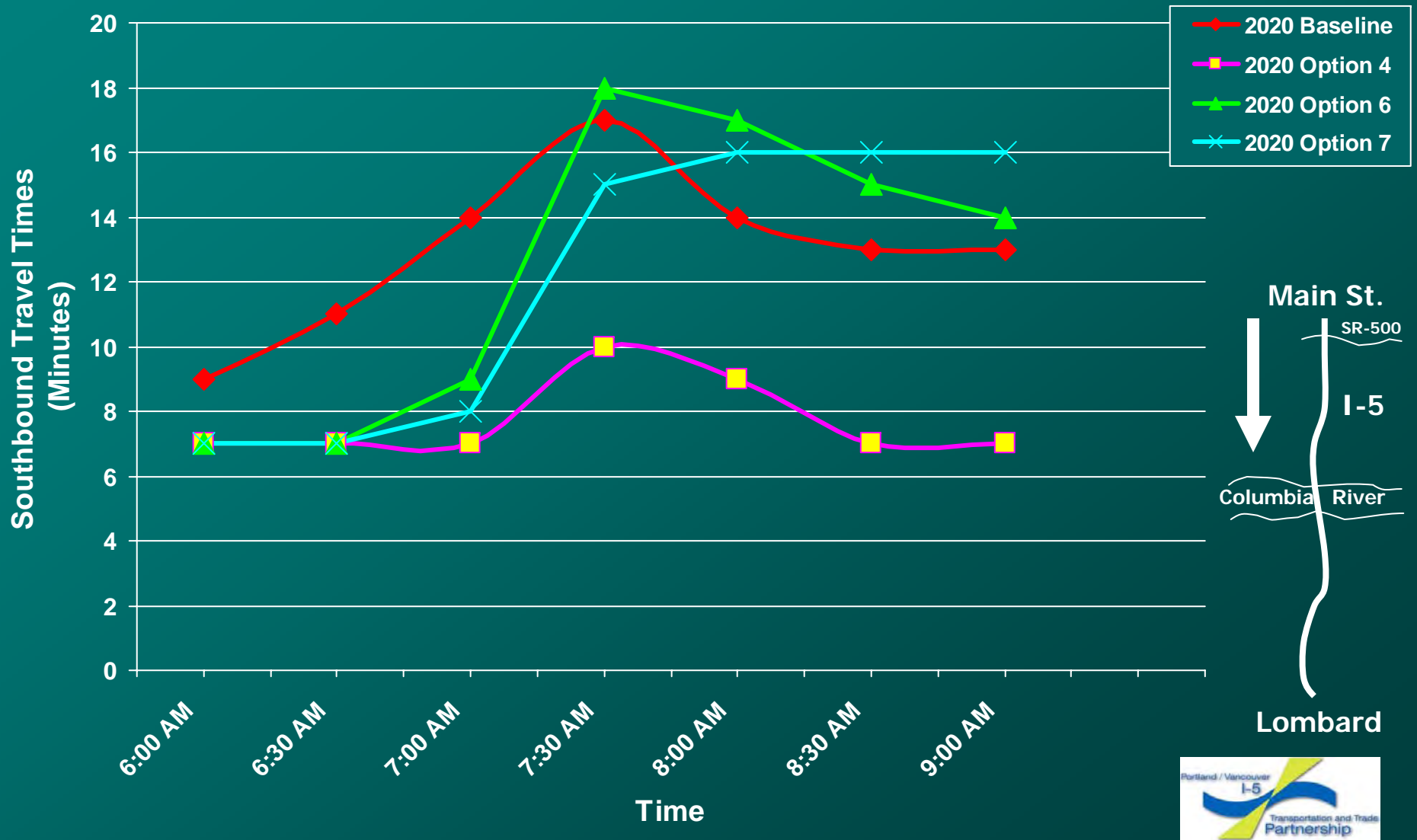


Average Speed I-5 Northbound - Lombard to Main St.



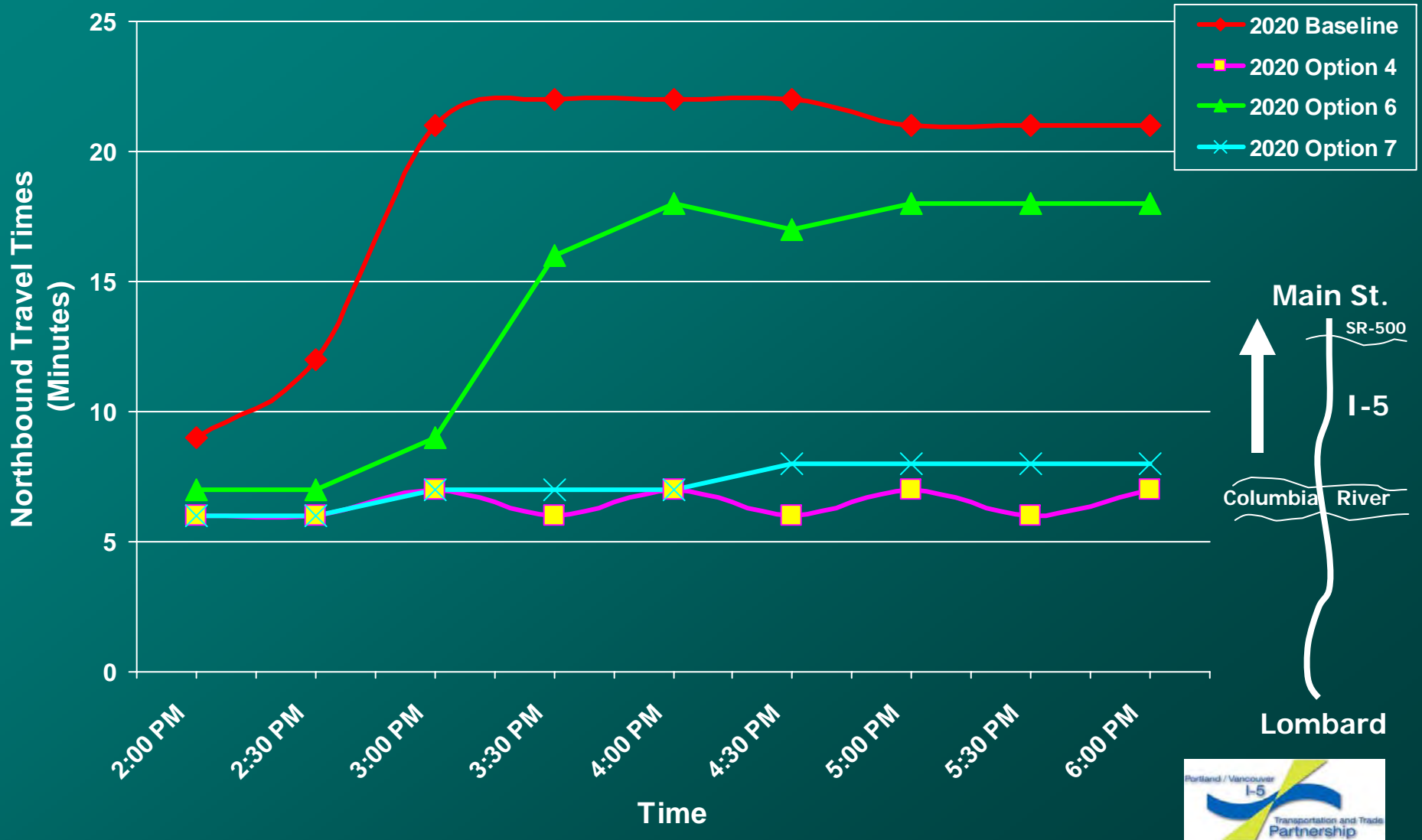
Travel Time

I-5 Southbound - Main St. to Lombard

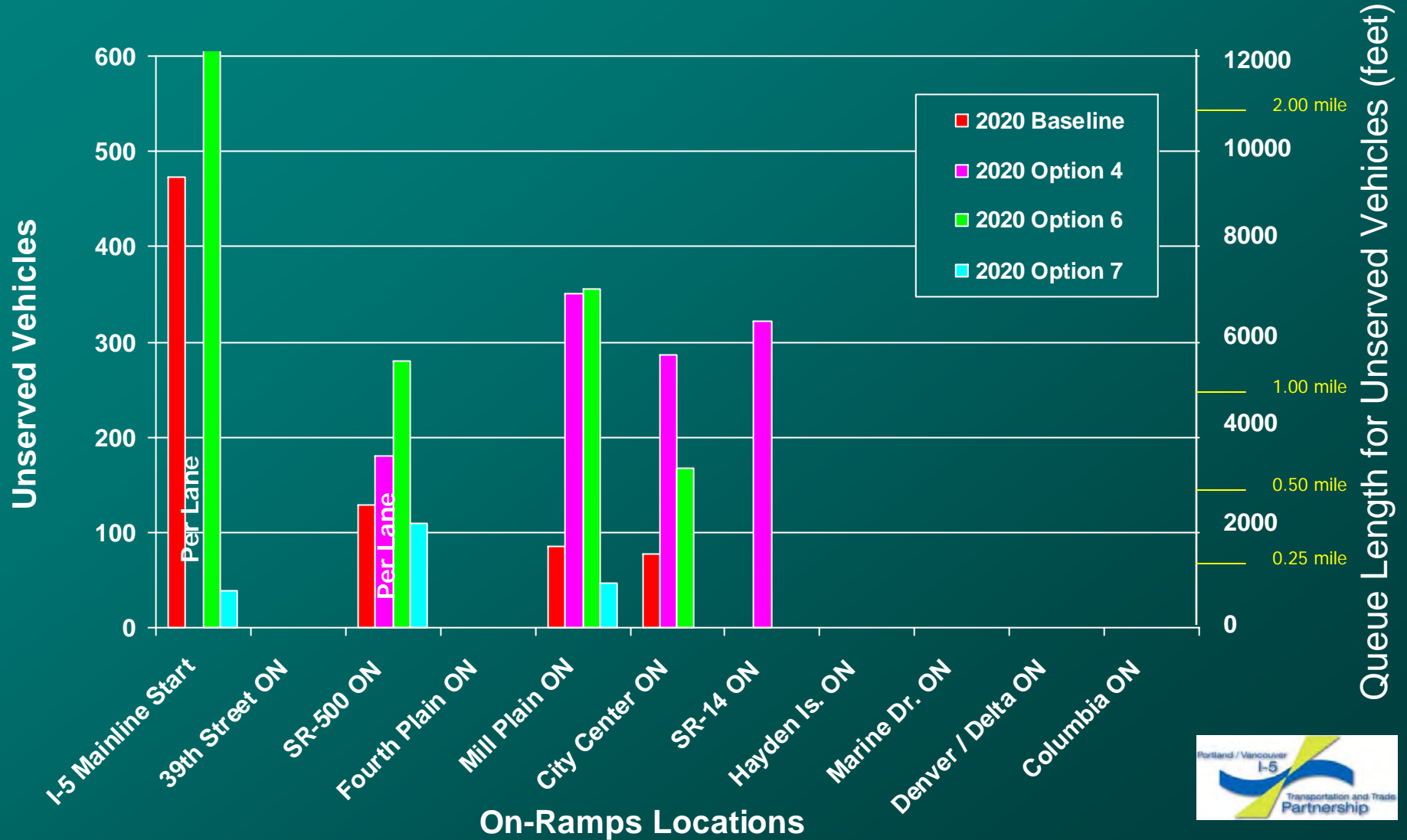


Travel Time

I-5 Northbound - Lombard to Main St.



On-Ramps Impact I-5 Southbound (AM Peak Hour)



On-Ramps Impact I-5 Northbound (PM Peak Hour)

