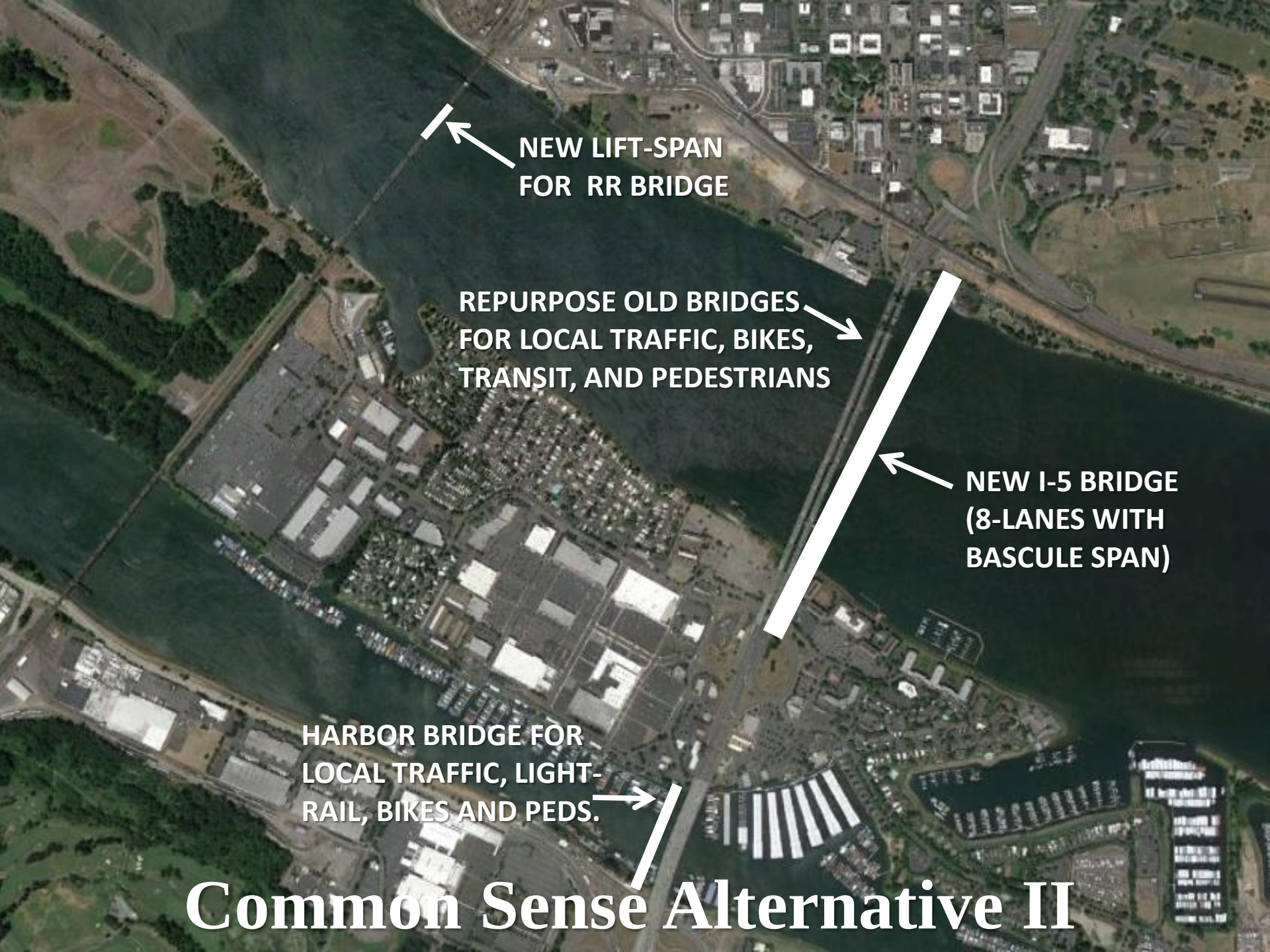
Common Sense Alternative II

CRC's Purpose and Needs

- Growing Travel Demand and Congestion
- Impaired Freight Movement
- Limited Public Transportation Operation, Connectivity and Reliability
- Safety and Vulnerability to Incidents
- Substandard Bicycle an Pedestrian Facilities
- Seismic Vulnerability



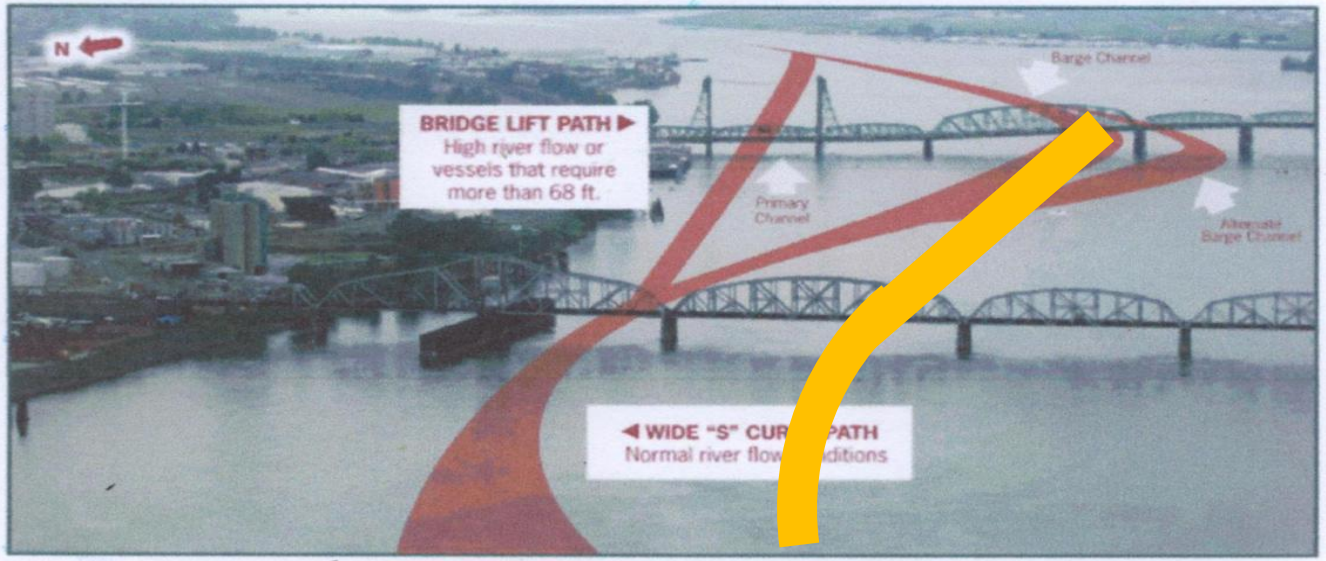
Common Sense Alternative II

Common Sense Alternative II
(Phase 1)

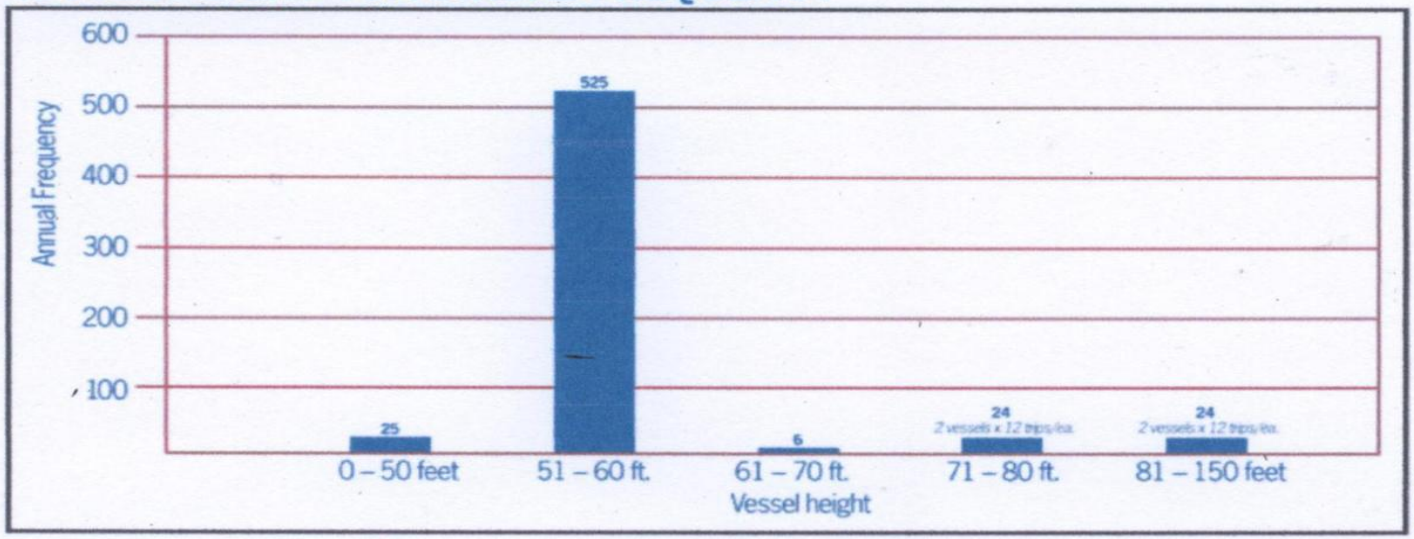
- Modify BNSF Railroad Bridge
- Build Additional Portland Harbor Bridge
- Construct New I-5 Drawbridge
- Repurpose Existing Interstate Bridges

BNSF Railroad Bridge Swing Span

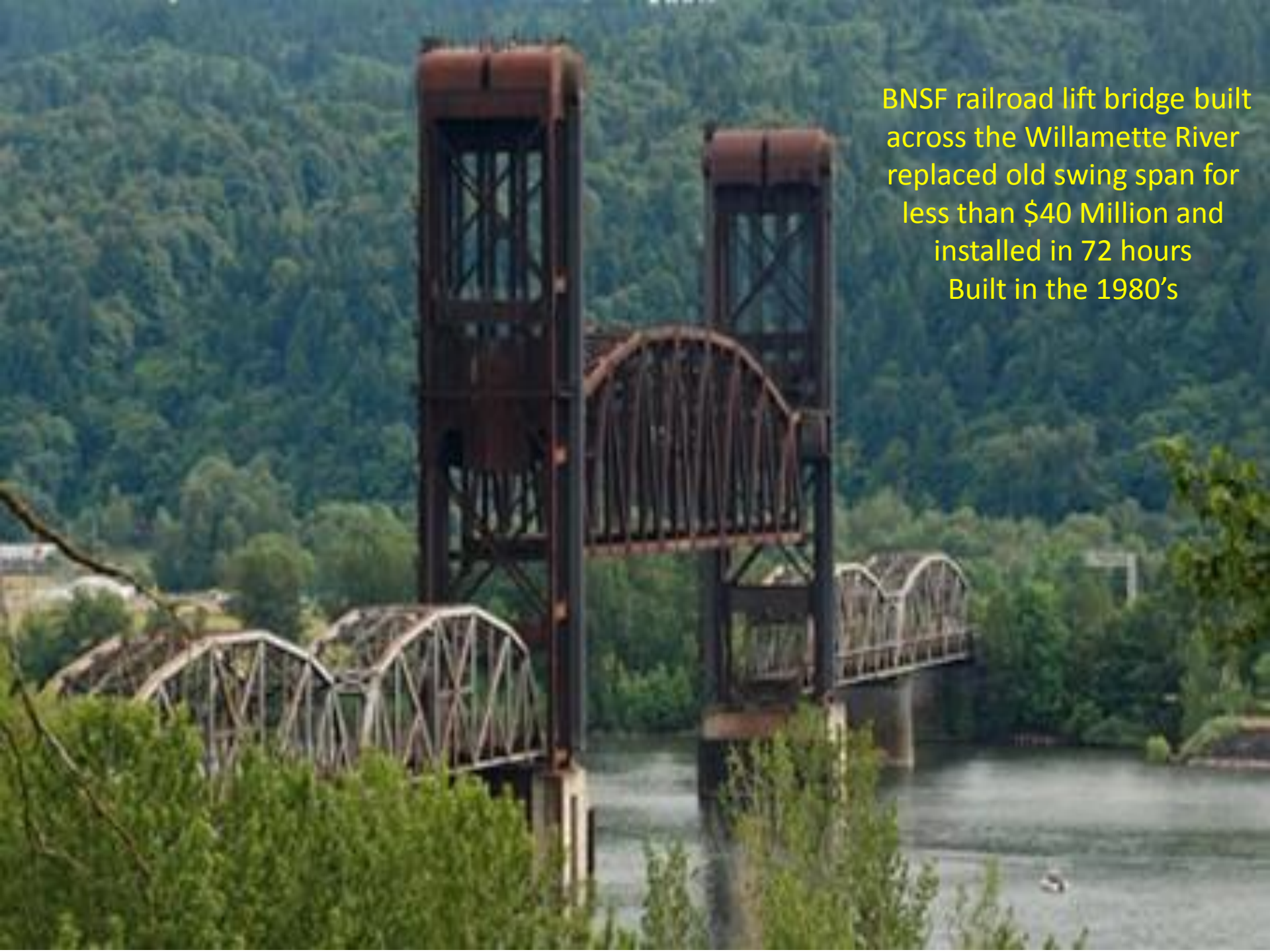
BARGE PATHS: NORMAL AND HIGH RIVER FLOWS



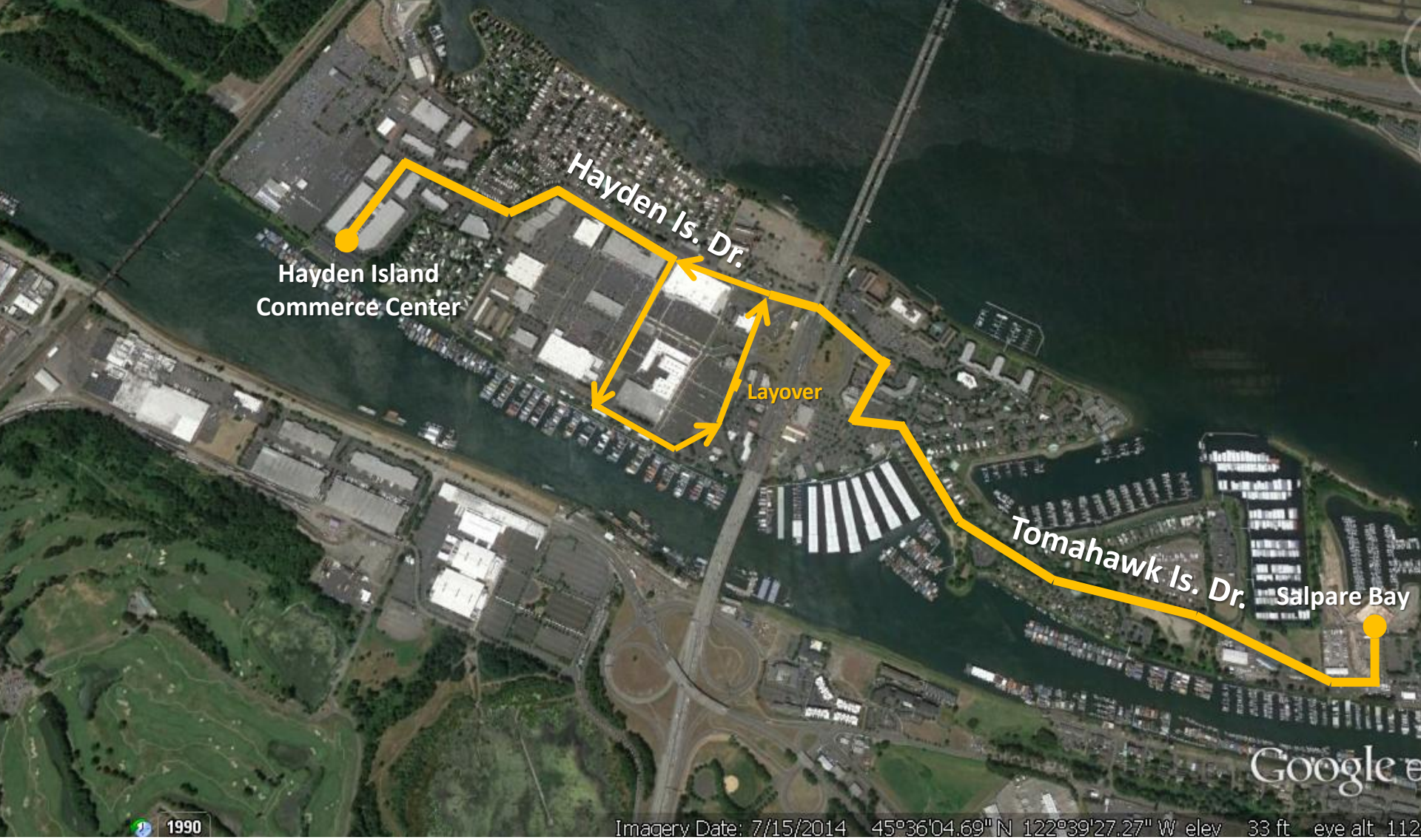
VESSEL HEIGHT VS. ANNUAL FREQUENCY



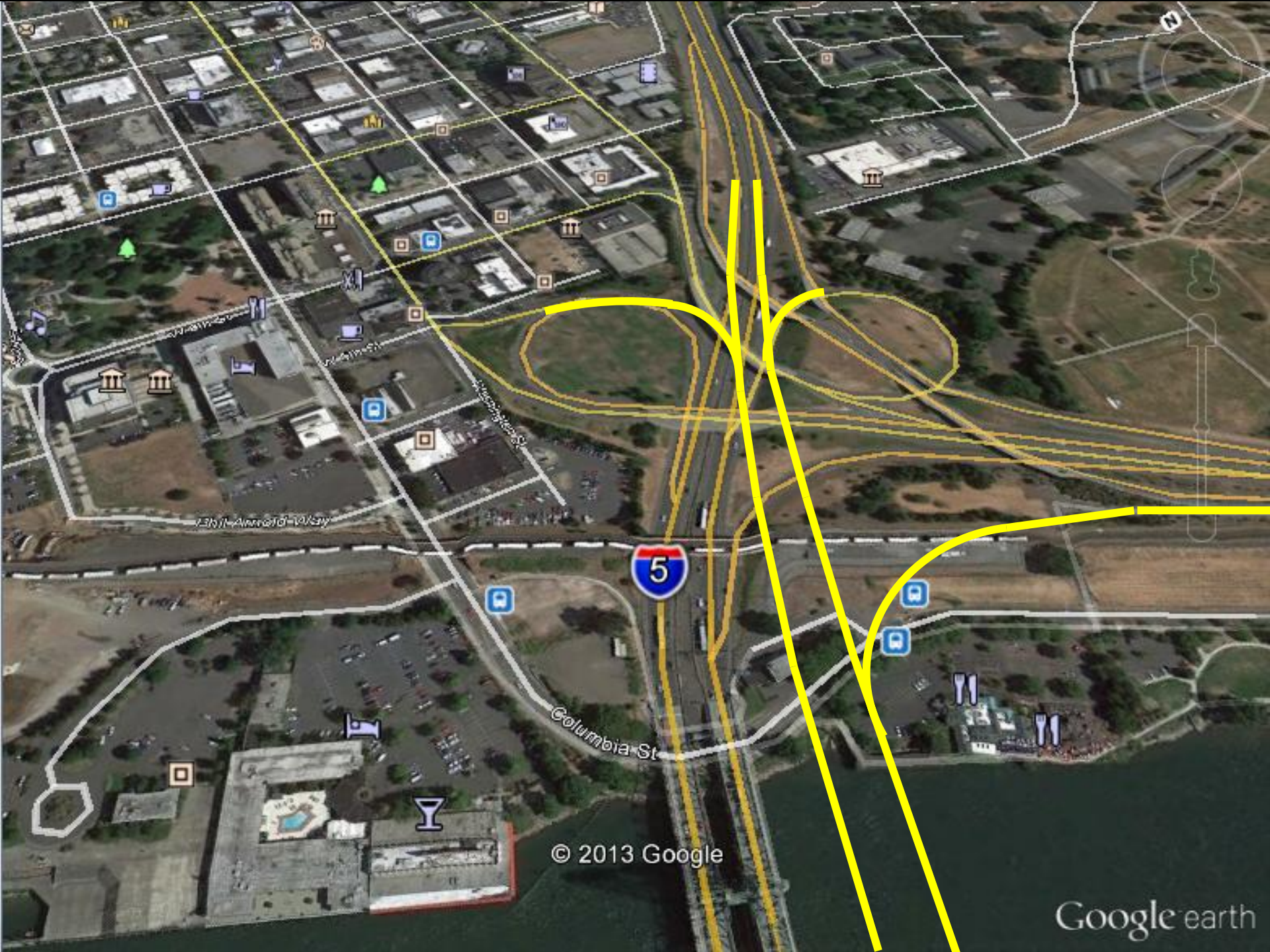
Data based on 2004 averages

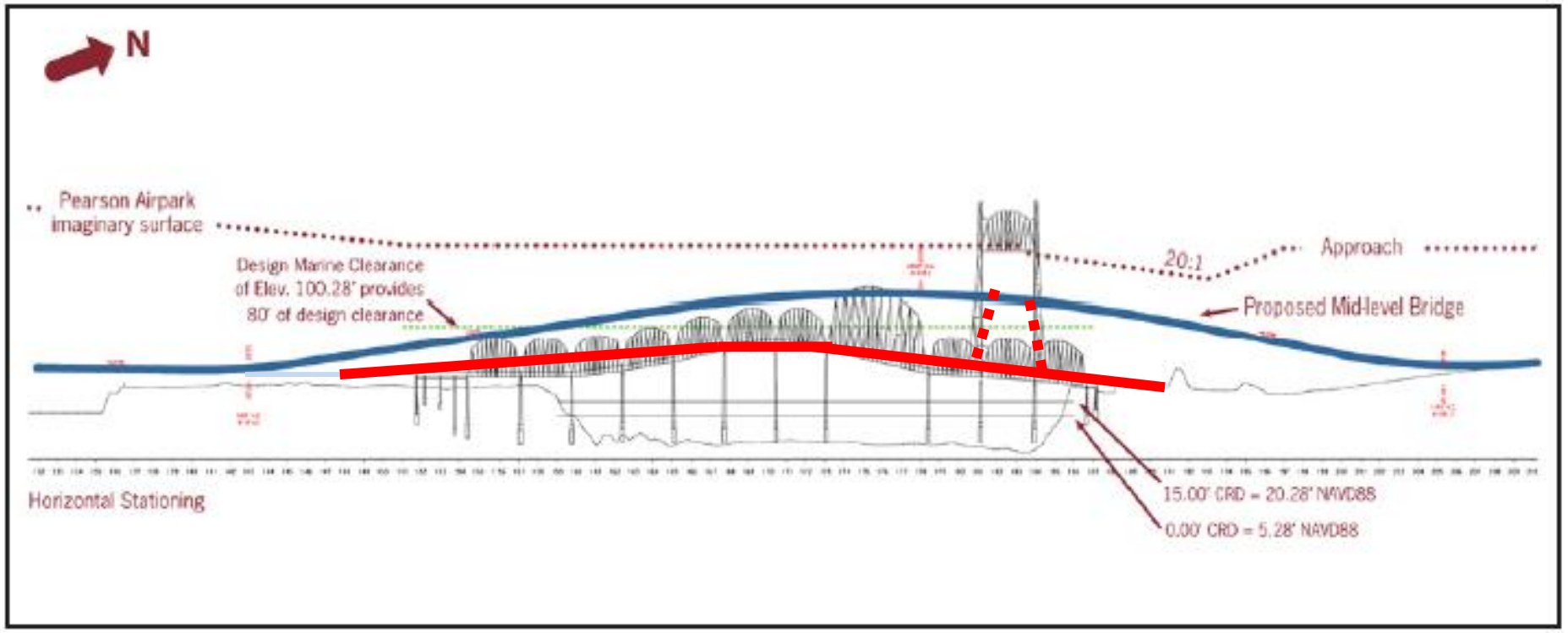

BNSF railroad lift bridge built
across the Willamette River
replaced old swing span for
less than $40 Million and
installed in 72 hours
Built in the 1980’s

Portland Harbor Bridge for local traffic, light rail, bikes and pedestrians.



Proposed Hayden Island Bus Route


5
Columbia St
© 2013 Google
Google earth



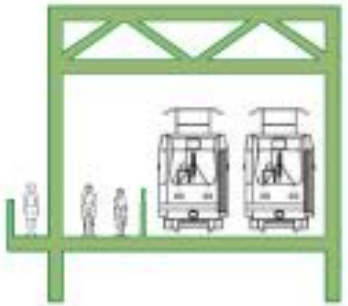
CRC Profiles

Locally Preferred Alternative (95')

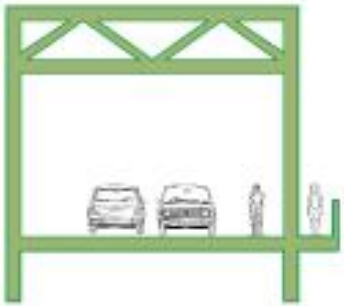
Common Sense Alternative II

BRIDGE River Clearances

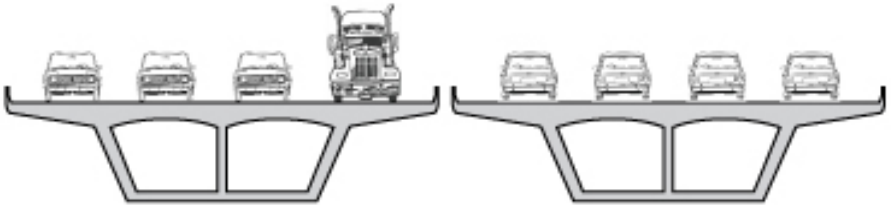
- STEP “A” - ASSUMED LOW-LEVEL 65 FT.
- EXISTING “HUMP” I-5 BRIDGES 72 FT.
- STEP “A” - ASSUMED MID-LEVEL 100 FT.
- FINALLY PROPOSED I-5 REPLACEMENT 116 FT.
- STEP “A” - ASSUMED HIGH-LEVEL 130 FT.
- I-205 GLENN JACKSON BRIDGE 144 FT.
- EXISTING I-5 LIFT SPANS 178 FT.



Light Rail, Cycle-Track & Pedestrians



Local traffic, Buses & Pedestrians



Freeway – 3 through lanes + add/drop lane each way

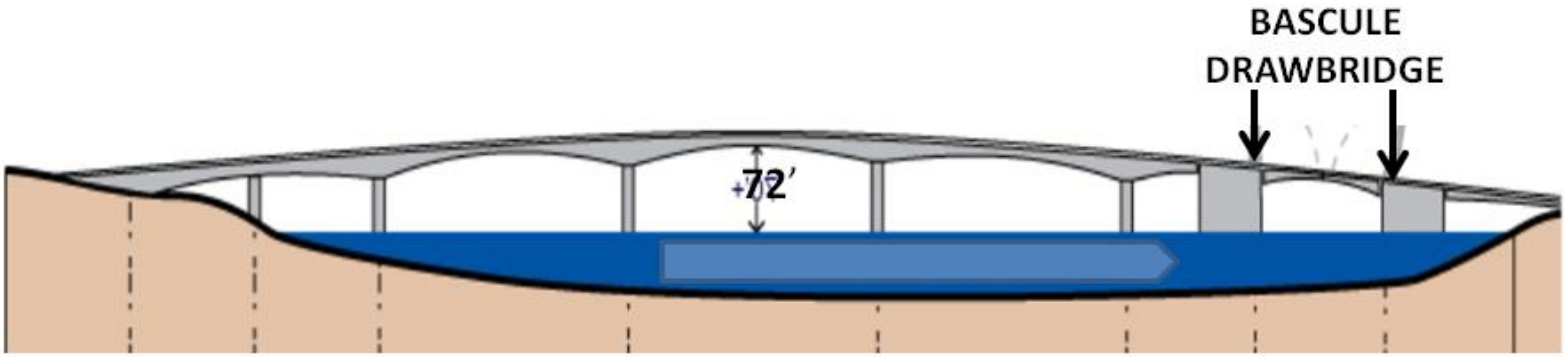
Existing Lift Span Bridges

New I-5 Bascule Bridge

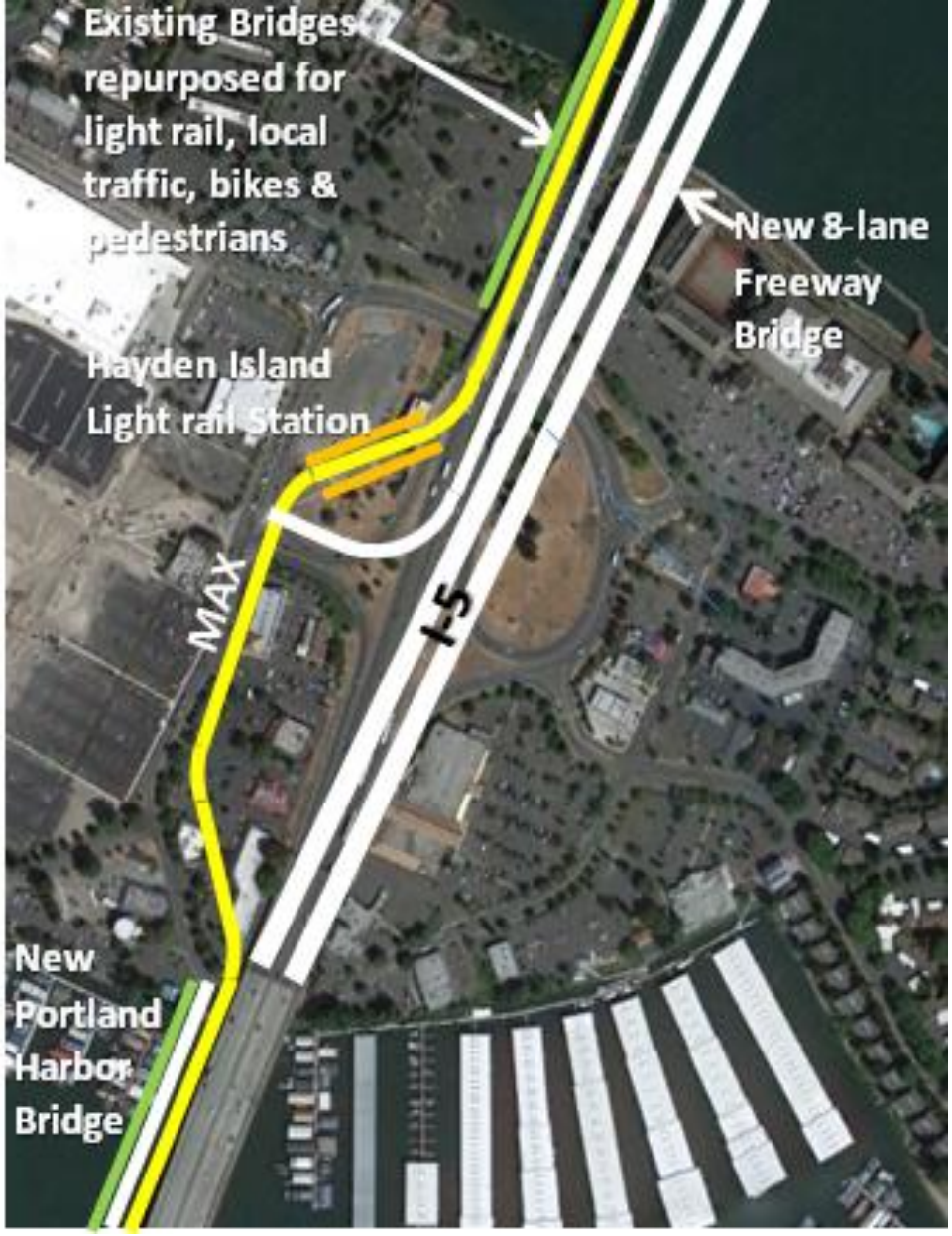
(Cross-Section looking North toward Vancouver)

COMMON SENSE ALTERNATIVE II (PHASE 1)

Construct a new I-5 Bridge (upstream, 8-lanes, 72 ft. river clearance, bascule draw-span/align with existing lift-spans)

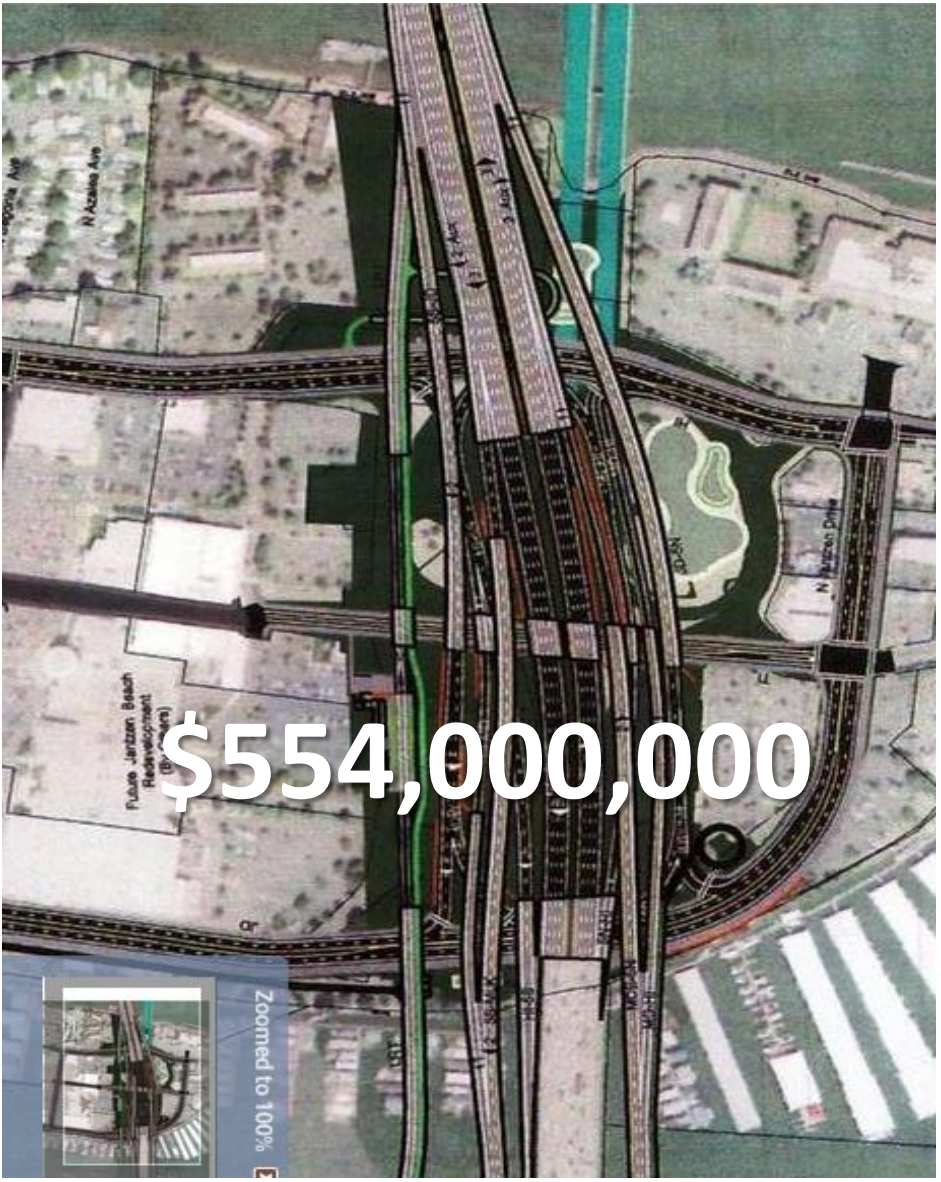


CSA PROPOSAL - Bascule draw span similar to this new Woodrow Wilson I-95 Bridge in Washington DC



Hayden Island **Vancouver**

Common Sense Alternative II



Hayden Island

CRC - Preferred Alternative

Vancouver Interchange

CRC - Preferred Alternative


Esther Street
Future LRT
Columbia Street
BRT (C-Tran)
5th St.
3rd St.
Waterfront
Vancouver
I-5
I-5
BRT
Local Traffic
Existing Bridges

`

Comparative Costs (millions)

	Oregon only	CSAII
BNSF Railroad Bridge Lift Span	NA	$100
Replacement bridge and approaches	$1094.8	$600
Demolition of existing bridge	$78.5	NA
Highway - other than bridge construction/ demolition costs	$695.1	$50
Transit - other than bridge construction/ demolition costs	$709.9	$150
Bicycle/Pedestrian improvements	$37.6	$10
Toll Bond Issuance Cost, Capitalized Interest, Bond Reserves	$32.7	$11
Interim Borrowing Costs	$63.1	$21
Bridge height mitigation	$86.4	NA
TOTAL EXPENSE	$2798.1	$942

Proposed Light Rail Extension to Waterfront Vancouver

(A component of the Common Sense Alternative II)

By

The Association of Oregon Rail and Transit Advocates

August 2014

Waterfront Vancouver Development

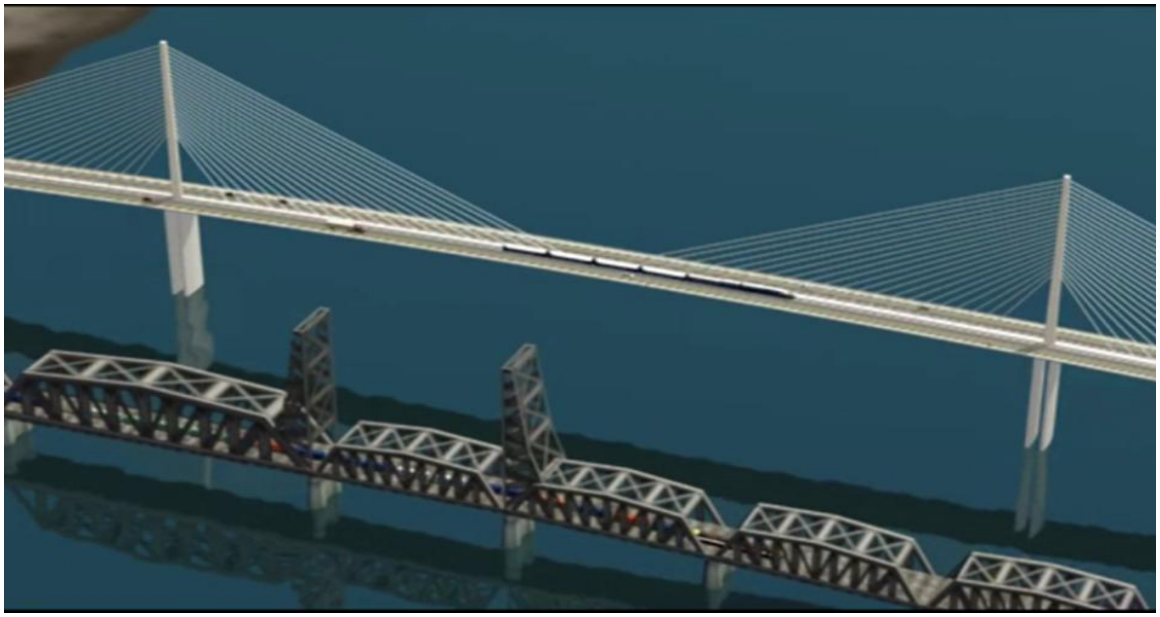

FESTIVAL

Light Rail Yellow Line Extension to Waterfront Vancouver Development and Amtrak Station

Waterfront Vancouver
Proposed Yellow Line Extension

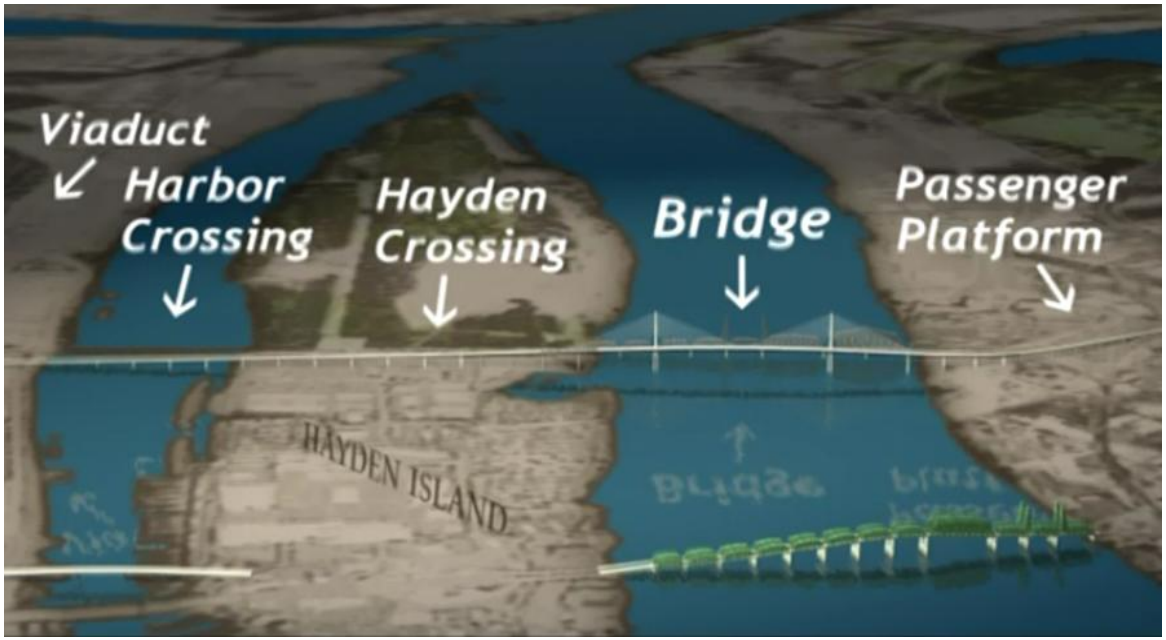

Esther Street
Columbia Street
5th St.
3rd St.
MAX Station
Waterfront
Vancouver
I-5
I-5
Local Traffic
MAX
Existing Bridges

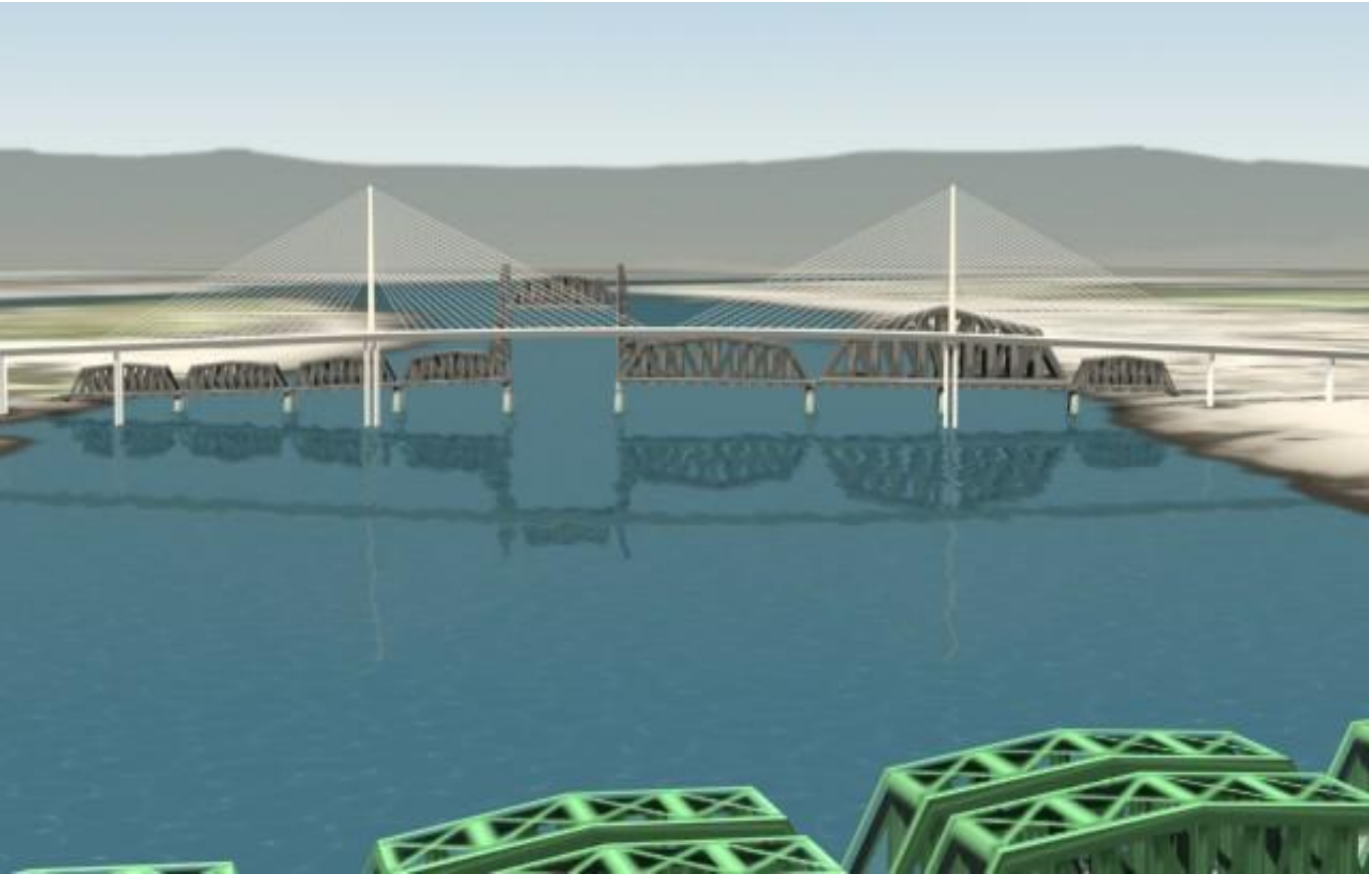
Pedestrian Sky Bridge
to Amtrak Station



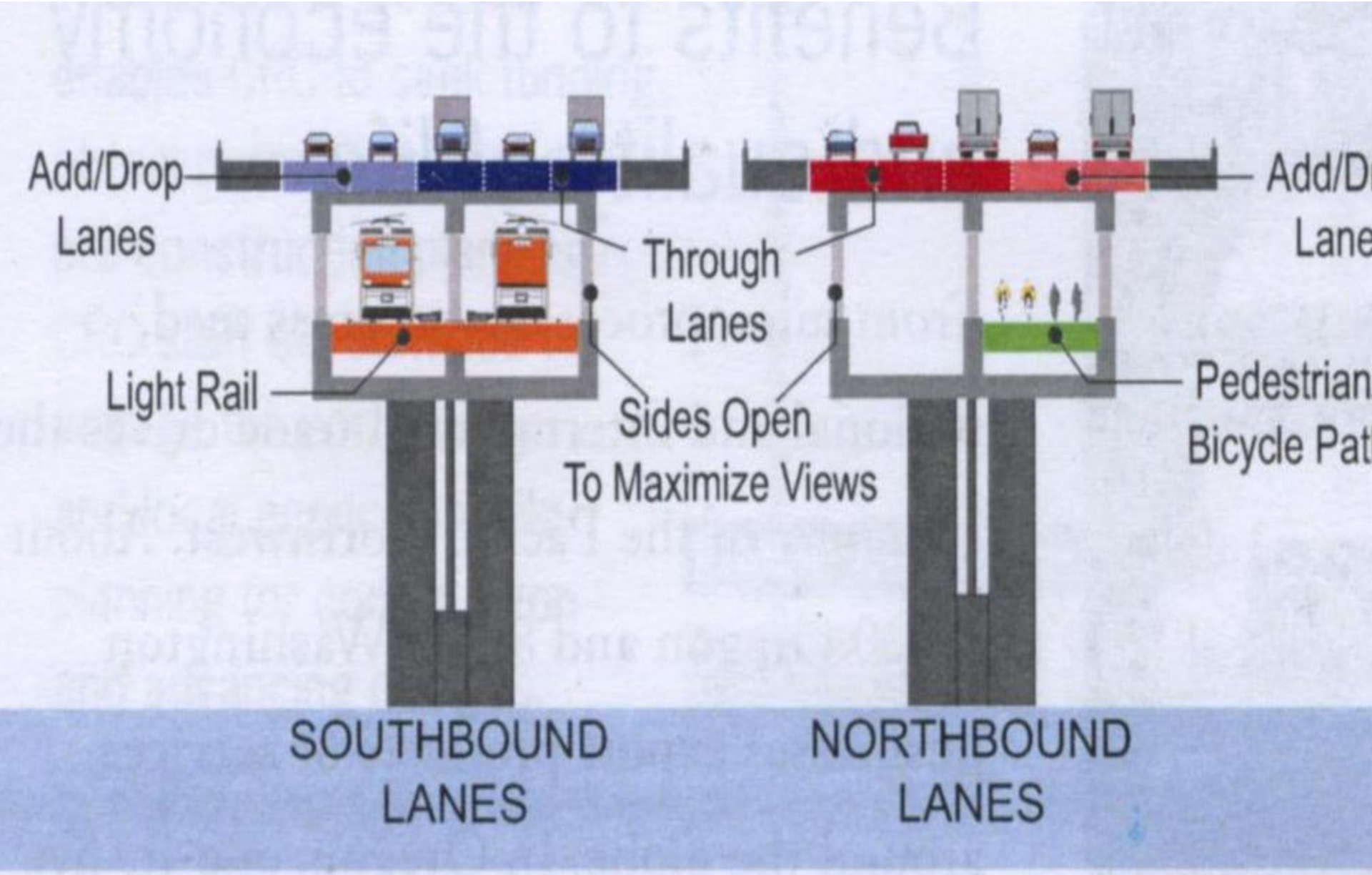
COMMON SENSE ALTERNATIVE II (PHASE 2)

Construct a high-level bridge adjacent to the BNSF RR Bridge, with an auxiliary 2-lane roadway, cycle-track and walkway - as part of a 3-mile bypass of the freight congestion between North Portland and Vancouver junctions for regional passenger and commuter rail.





THE CRC BRIDGE AT 95 FEET CLEARANCE OVER RIVER



Design calls for two structures with a total of 10 lanes and full safety shoulders.

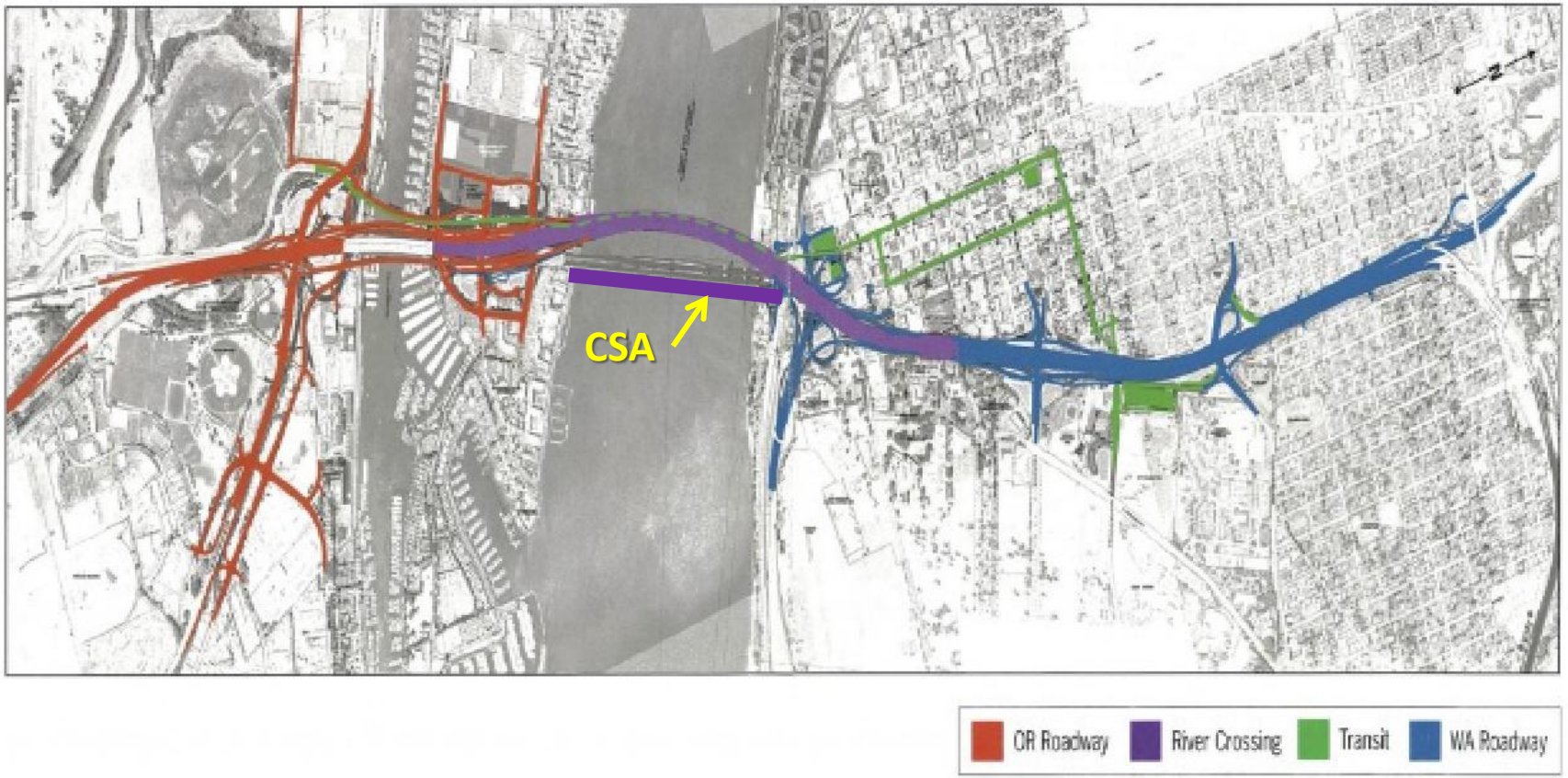
Oregon Roadway and Interchanges	Cost	Funding Source
Oregon Roadway and Interchanges Total	$595 million	State and/or federal funds

Columbia River Bridge and Approaches	Cost	Funding Source
Columbia River Bridge and Approaches Total	$1.2 billion	Tolls and State or Federal funds

Washington Roadway and Interchanges	Cost	Funding Source
Washington Roadway and Interchanges Total	$435 million	State and/or Federal Funds

Light Rail Transit Extension	Cost	Funding Source
Light Rail Transit Extension Total	$830 million	$650 million FTA New Starts

Between $2.2 and $2.6 billion in funding from FHWA ($400 M), tolls ($900 M - $1.3 B), and OR/WA ($900 M).




Hayden Island
CRC – Preferred Alternative
MakeAGIF.com

2,900 free parking spaces

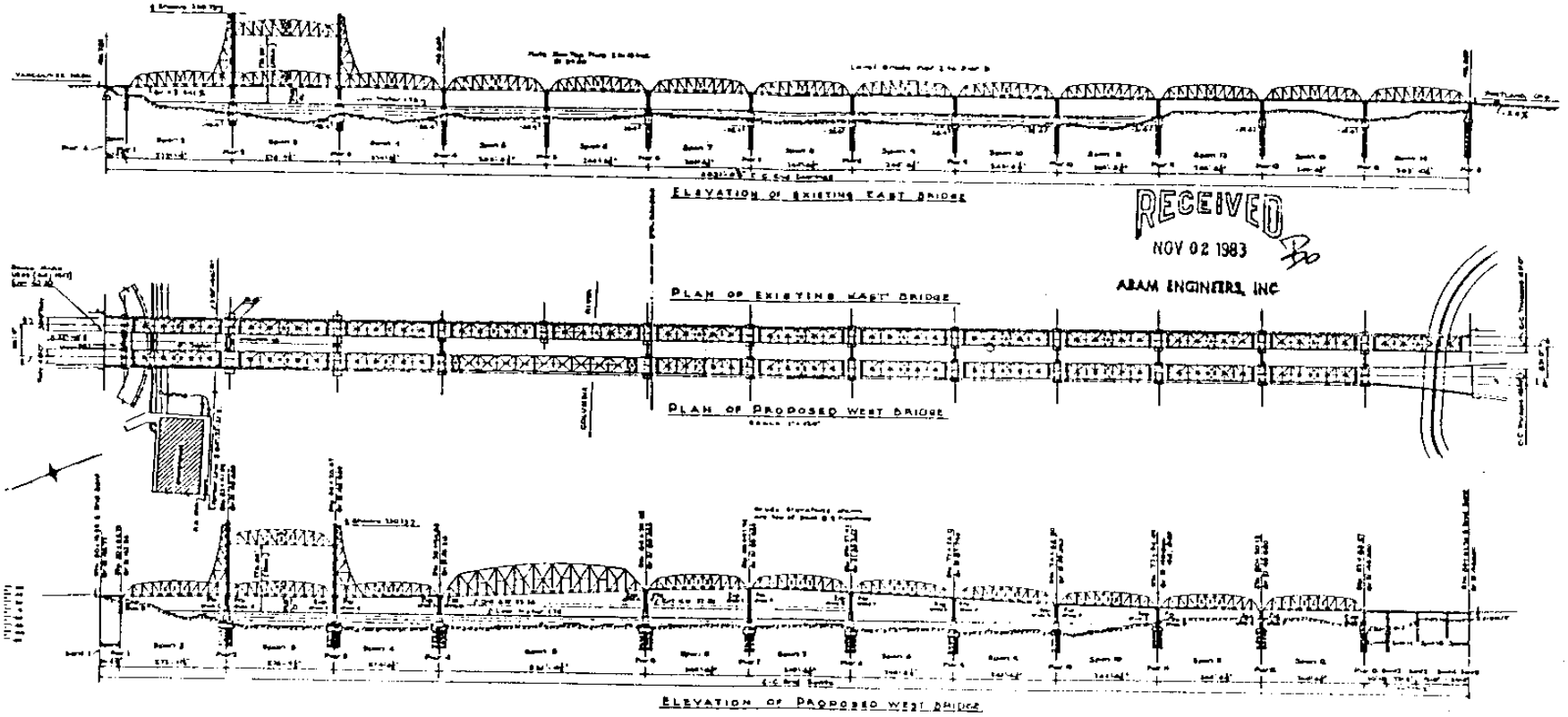
<u>Not</u> the way to provide effective public transit

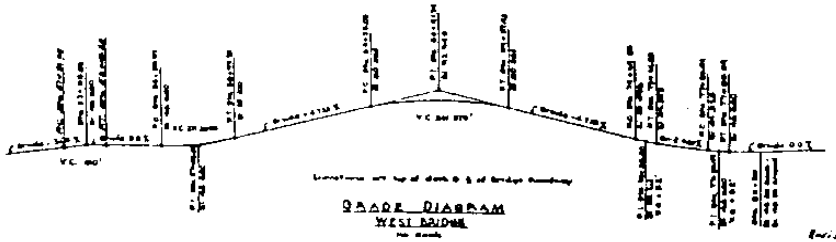
Columbia River CROSSING

Replacement Bridge Draft Concept

with high capacity transit inside southbound bridge (Stacked Transit/Highway Bridge)

Rendering is for discussion purposes only and is subject to change. Transit alignment could be used for bus rapid transit or light rail. –11/27/07





GENERAL NOTES

Bridge designed for H20-S16-44 loading.

All concrete shall be Class "A" and as modified by this special provisions with a 28 day compressive strength of 3000 psi and f'c=1500 psi.

All reinforcing steel shall be entered at the ends and bars shall be 3 to no 11 inclusive shall conform to A.S.T.M. specification A 305 and shall be tested 20 diameters of all splices unless marked or shown otherwise. 12" Stirrup bars shall be bowed 50 diameters of all splices unless noted or shown otherwise.

All reinforcement shall be spaced 2" clear of nearest face of concrete unless noted or shown otherwise.

Revised as confirmed 3-14-56

FIG. 4 - 1955 PLAN OF WEST BRIDGE

INTERSTATE BRIDGE
OVER
COLUMBIA RIVER
PACIFIC HIGHWAY
PLAN & ELEVATION

SCALE	DRAWN BY C.C.B.	SHEET 1 OF 52
JUNE 8, 1955	TRACED BY C.C.B.	DRAWING NO. 7334
CALC. BK. NO. 570	CHECKED BY	
ACCOMP. BY DRAWING NO.		

Twin obelisks guard each end of the bridge. The one on the Washington side carries a quote from John Ruskin: "Therefore when we build let us think that we build forever. Let it not be for present delight, nor for present use alone. Let it be such work as our descendants will thank us for. And let us think as we lay stone on stone that a time is to come when those stones will be held sacred because our hands have touched them and that men will say as they look upon the labor and wrought substance of, 'See this our fathers did for us'."

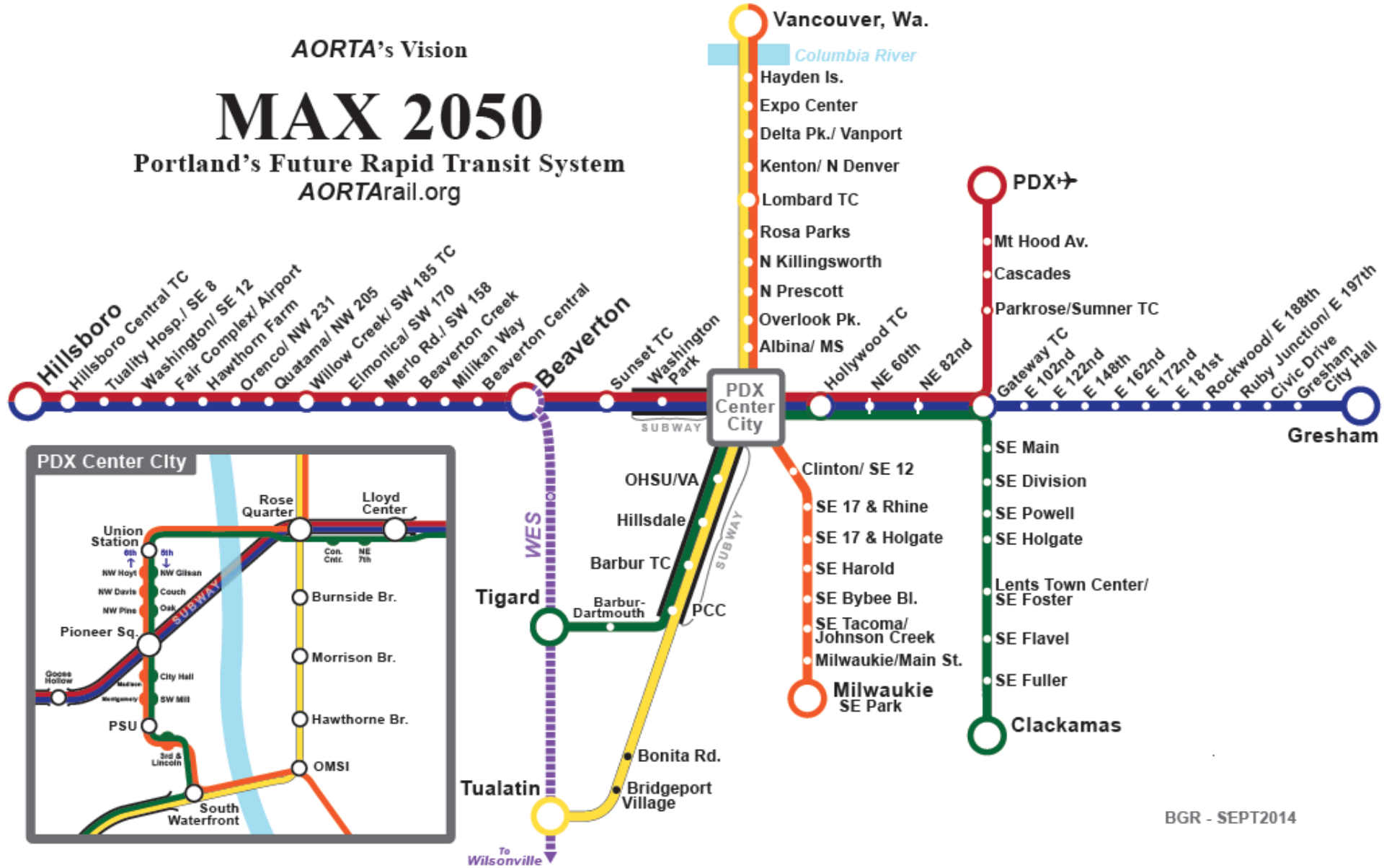
WHAT'S OLD COULD BE NEW AGAIN

AORTA's Vision

MAX 2050

Portland's Future Rapid Transit System

*AORTA*rail.org



BGR - SEPT2014