

# Reconsidering the Crossing

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Testimony to the Portland Planning Commission, April 8, 2008

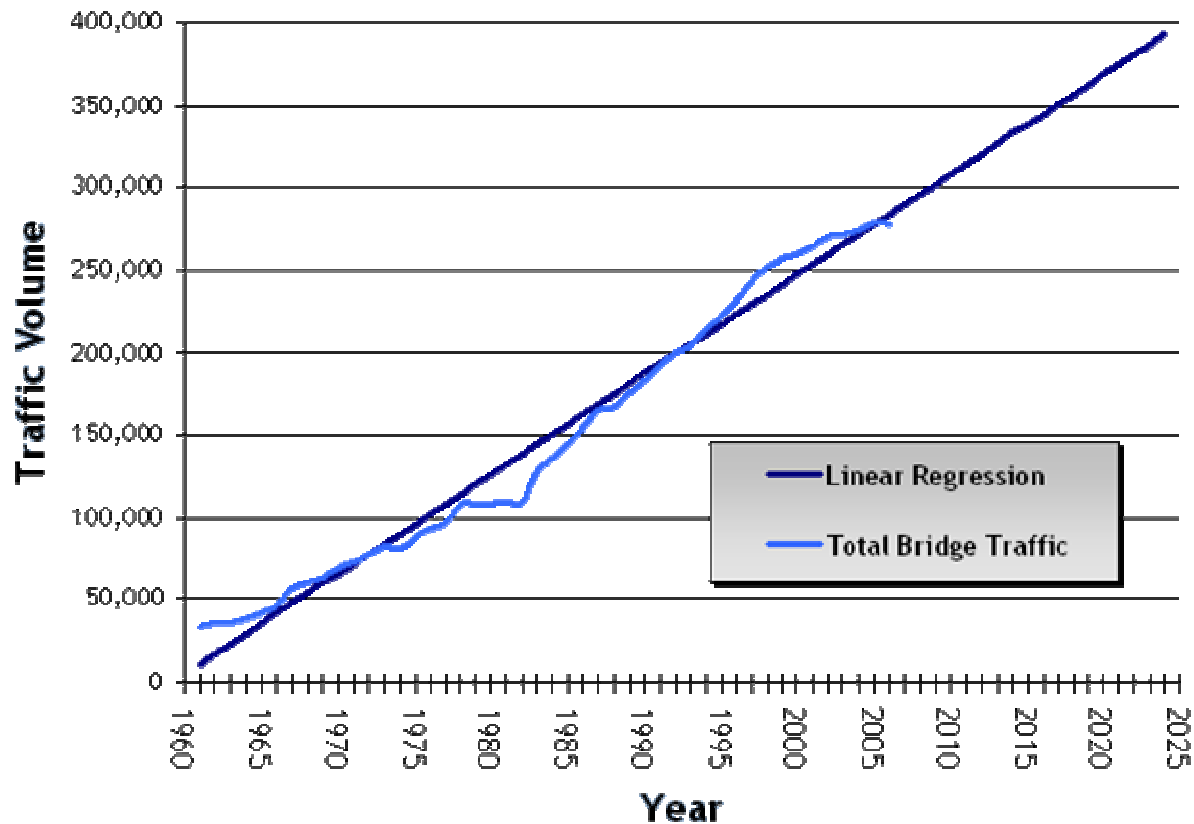
# Factors to Consider

- Global warming
- Demand
- Cost
- Safety
- Freight
- Seismic safety
- A phased alternative
- Process

# What does it mean to plan?

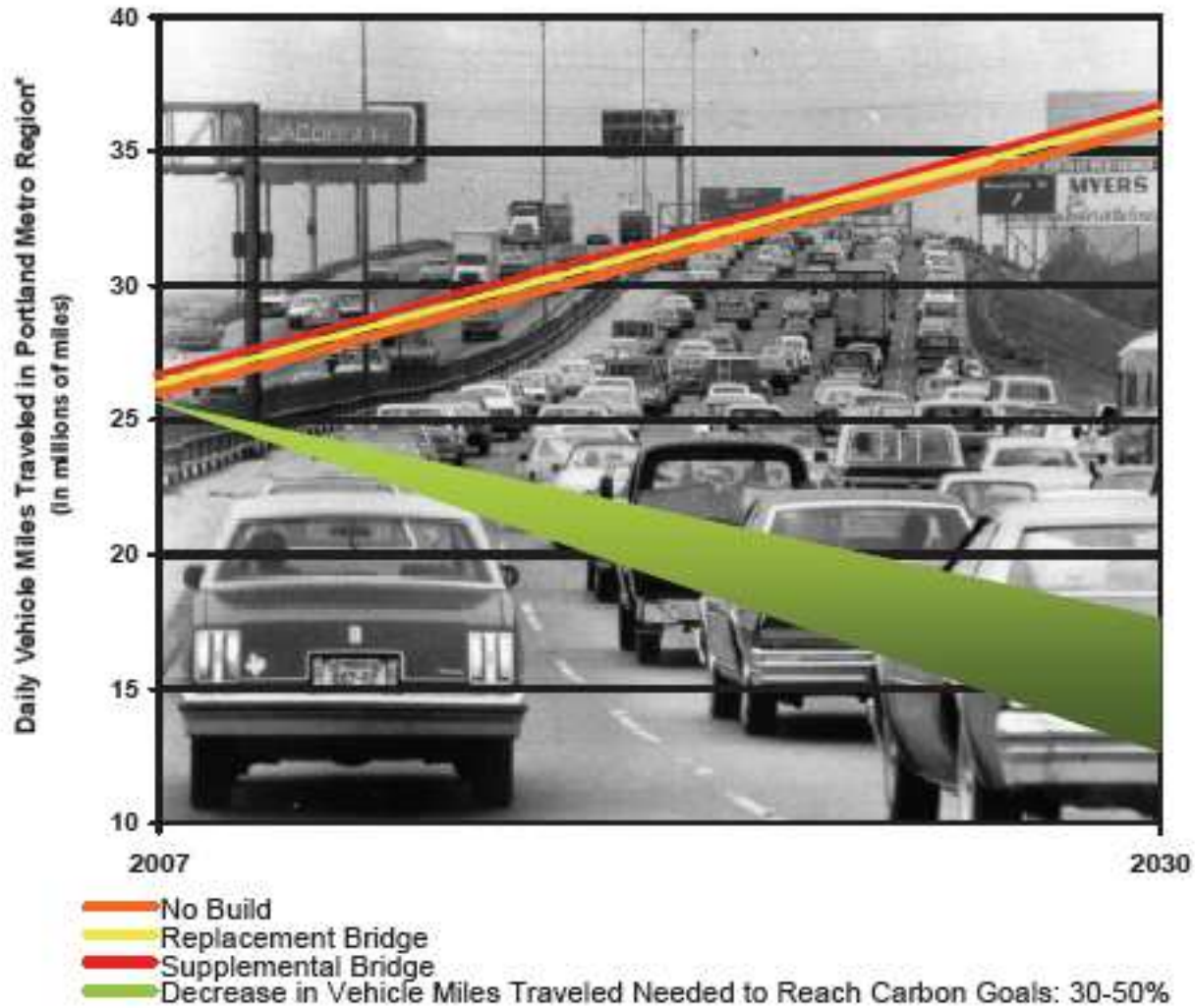
## Columbia River Bridge Crossings, 1961 - 2024

Historical *average month* and *average day* traffic data volumes, across the Interstate Bridge (I-5) and the Glenn Jackson Bridge (I-205), collected over the period 1961 through present are used to perform a linear projection forward to volumes anticipated should current trends continue. [Actual data](#) is shown below graph.



Source: Regional Transportation Commission (Vancouver, WA).

# CRC increases VMT



# But the world is changing

- Global warming
- Expensive gas
- Trend toward more compact development

# Global Warming Goals

- Oregon
  - Reduce CO<sub>2</sub> 75% from 1990 levels
- Washington
  - Reduce CO<sub>2</sub> 50% from 1990 levels
- Transportation is 50% of Oregon's greenhouse gas emissions

# Wall Street Anticipates Cap and Trade

Three of Wall Street's biggest investment banks are set to announce today that they are imposing new environmental standards that will make it harder for companies to get financing to build coal-fired power plants in the U.S.

Citigroup Inc., J.P. Morgan Chase & Co. and Morgan Stanley say they have concluded that the U.S. government will cap greenhouse-gas emissions from power plants sometime in the next few years. The banks will require utilities seeking financing for plants before then to prove the plants will be economically viable even under potentially stringent federal caps on carbon dioxide, the main man-made greenhouse gas.

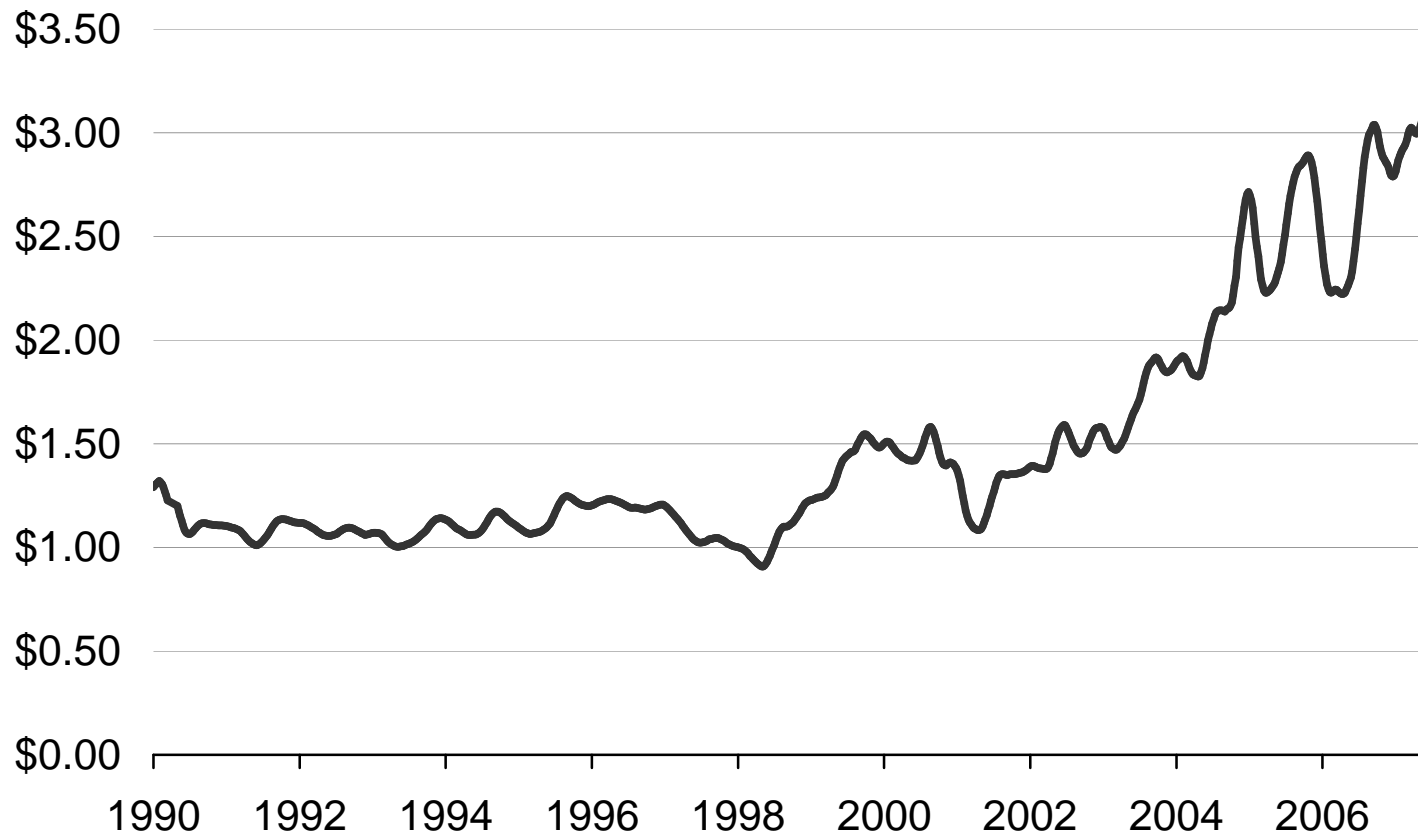
The move shows Wall Street is the latest U.S. business sector that sees some kind of government emissions-capping as inevitable.

- Source: Ball, J. (2008). Wall Street Shows Skepticism Over Coal; Banks Push Utilities To Plan for Impact Of Emissions Caps. Wall Street Journal.(February 4) A6.

# A Sea Change in Energy Prices

## Gas Prices Break \$3.00 Gallon

Average Price of Gasoline (Gallon) (12 week moving average)



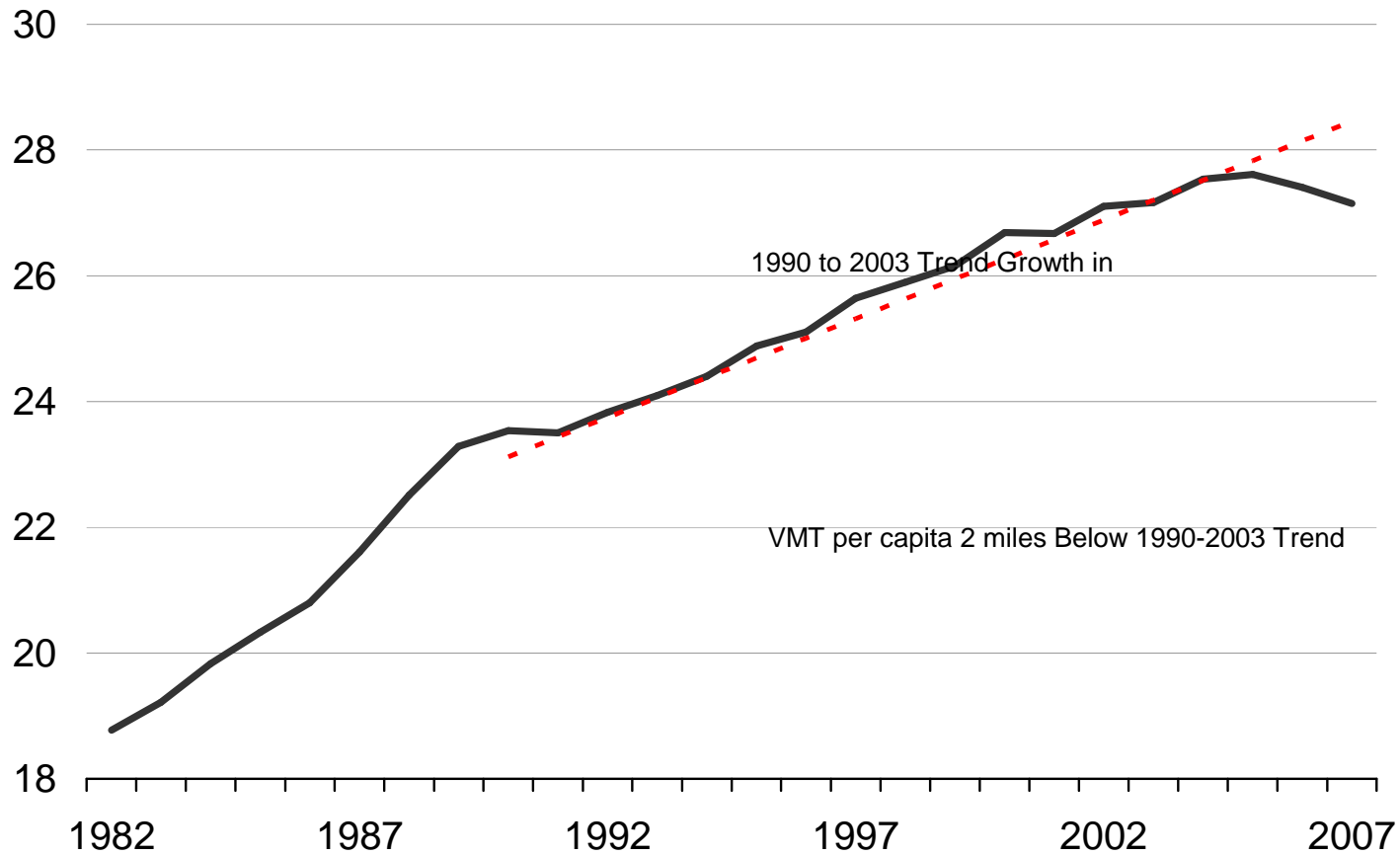
Source: Bureau of Economic Analysis



# An Historic Reversal

## Car Travel Now Declining Per Capita

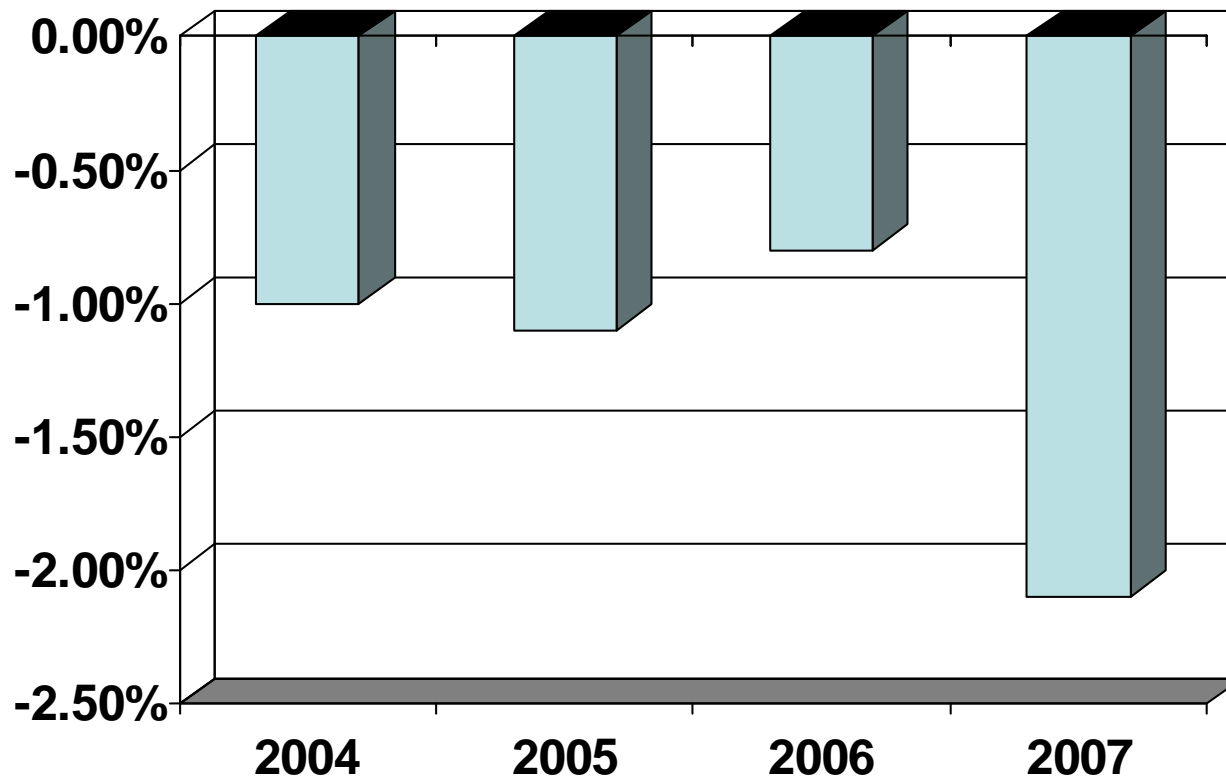
Vehicle Miles Travelled Per Capita Per Day, United States



Source: Impresa calculations, US DOT data

# Oregonians Are Now Driving Less

Year over year change in gasoline sales, per capita



Source: ODOT data, Impresa calculations

# Models Exaggerate Future Congestion

- “. . . current travel demand models tend to predict unreasonably bad conditions in the absence of a proposed highway or transit investment.”
- “Before conditions get as bad as they are forecasted, people make other changes, such as residence or employment changes to avoid the excessive travel costs.”
- Source: Government Accountability Office, 2005

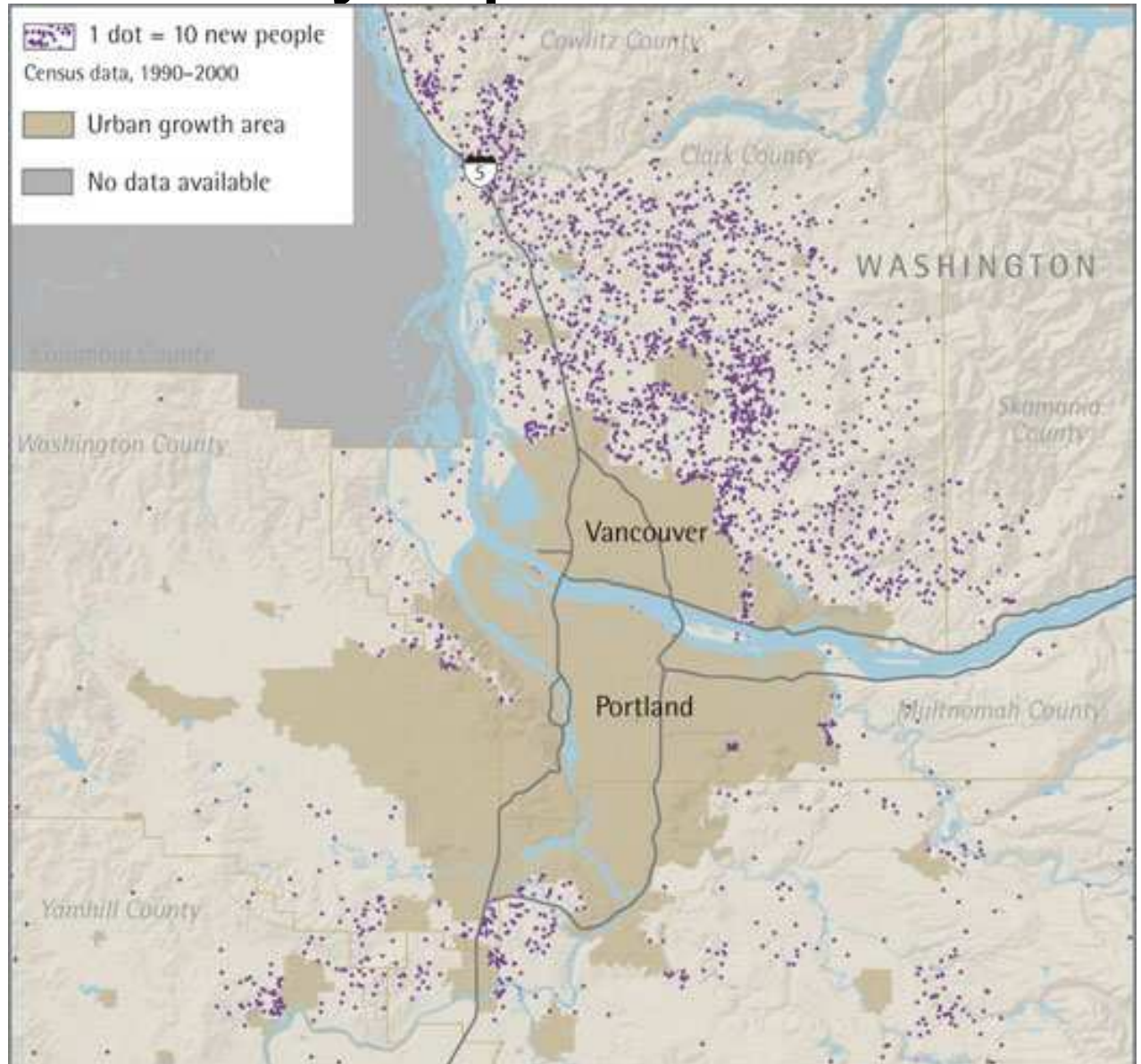
# Models Shouldn't Hide Assumptions

- “It is incumbent on developers of models to provide understanding of models and data”
- It is not enough to say “professional practices and procedures were used”
- Source: Krieger, Shiu & Naylor, NCHRP Synthesis 364, Transportation Research Board

# Clark County Sprawls

Demand for more roads is driven by Clark County's sprawling development pattern

Source: Sightline Institute, Census Bureau



# CRC Projections Assumed Continued Sprawl

Origin of I-5 AM Peak Period Trips, 2005 and 2030

	2005	2030	Change	Percent of Change
Inner Urban Clark County	6,878	7,344	466	7%
Suburban Fringe Clark County	14,678	21,204	6,526	93%
Total	21,556	28,548	6,992	100%

(Source: CRC: 2030 Transit Travel Markets Technical Memo, 2007)

# Clark County Commuting

Clark County Residents Working in 3 Oregon Counties	46,226
Residents of 3 Oregon Counties Working in Clark County	8,463

Source: Census Bureau, 2004 data

# Congestion Relief Doubtful

- Other chokepoints: The chokepoint is likely to move further south on I-5
- Induced demand: Added capacity will induce additional traffic



# Cost and Financing

- Total Cost Approximately \$4.2 billion
- Equal to
  - \$2,000 per person in the metro area
  - \$8,000 for each family of four
  - 80 OHSU trams

# “Draft” Funding Plan

Highway/Bridge Portion = \$3 billion

Approximate Sources:

Toll/Bonds:	\$ 1.0 billion
Federal Earmarks	\$ 500 million
Regional Match	\$ 1.5 billion

# Funding is problematic

## Federal

- Highway Trust Fund is broke
- Assumes massive earmarks

## Tolls

- Low quality for bonding
- No “investment grade” forecast

## Local

- No sources identified
- Financed regionally, would require 15 cent/gallon gas tax for \$1.5 billion

# Is it worth \$15.00/commuter/day?

- Tolls cover about 1/3 of highway costs
- Tolls estimated at \$2.50/crossing
- Full cost tolls would be \$7.50

Therefore, it costs \$15.00 per commuter  
each day for the new bridge

Do users want it at that price?

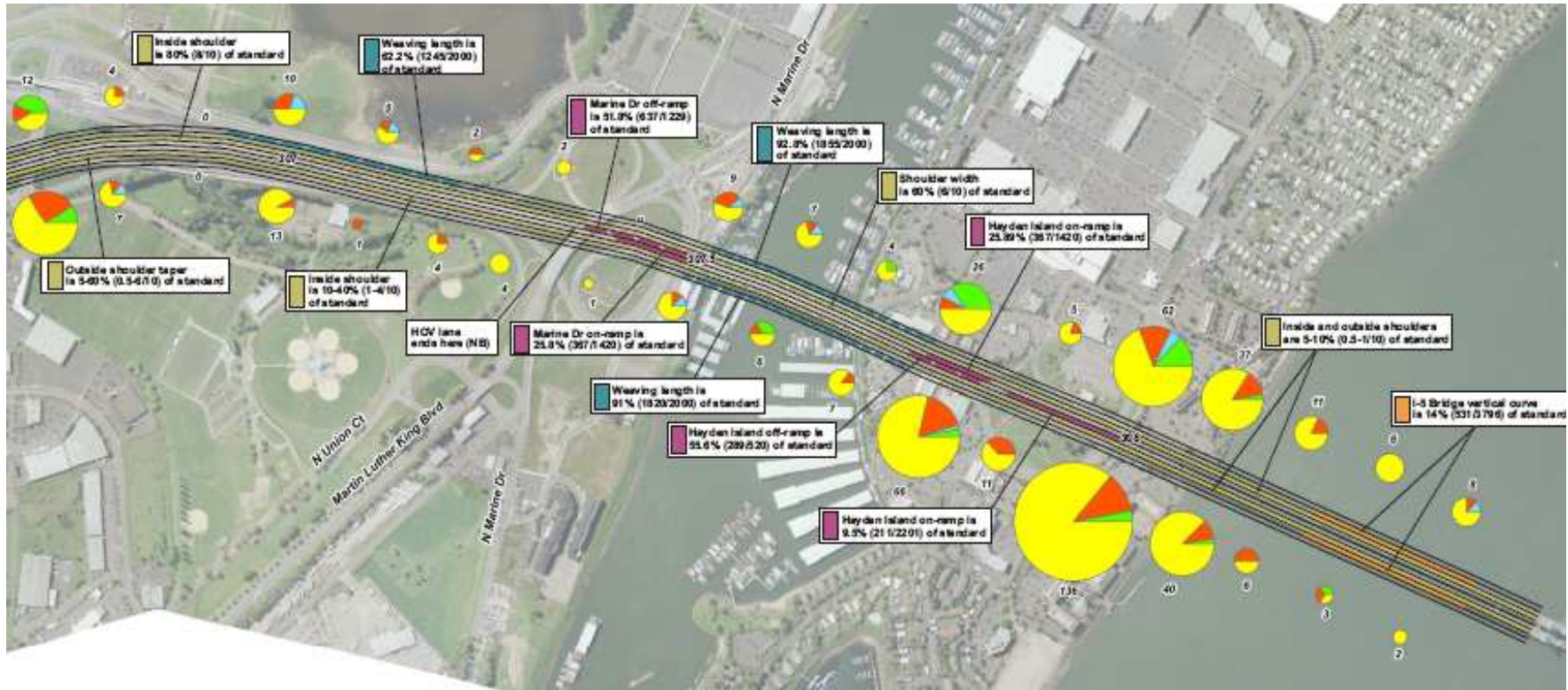
# Deep in Debt

- 80 to 85% of bridge cost would be borrowed.
- Bonding for both tolling and local share
- Huge interest costs—not included in cost estimates
- Debt service moves CRC to first in line for available revenue

# Safety is a Red Herring

- The interstate bridge is relatively safe
- Most accidents are related to congestion
- Most are minor
- Fewer accidents than other roads

# Hayden Island Ramps are Biggest Safety Problem; Few Accidents on Bridge Itself



Source: CRC, Yellow is rear-end collisions

# Crashes Worse on Fremont

- Fremont (I-405: West End Fremont Bridge to Russell Street)
  - 1.88 Crashes Per Million Vehicle Miles
- Marquam (I-5: Marquam Jct. Stadium Freeway to I-84)
  - 1.08 Crashes per million vehicle miles
- Interstate (I-5 N. Lombard to Washington State Line)
  - 1.06 Crashes per million vehicle miles

Source: Ness, 2006 ODOT State Highway Crash Rate Tables, (2007)



# Not the Least Safe Part of the State Highway System

Road Type	Accidents/Million Miles
• Urban Cities (Total)	1.20
• Interstate Freeways	0.52
• Other Fwys/Expressways	0.76
• Non-Freeways (Combined)	2.24
• Other Principal Arterials	2.23
• Minor Arterials	2.38
• Urban Collectors	1.84
• I-5 Bridge	1.06

Source: Ness, 2006 ODOT State Highway Crash Rate Tables, (2007)

# Freight: A Diversion

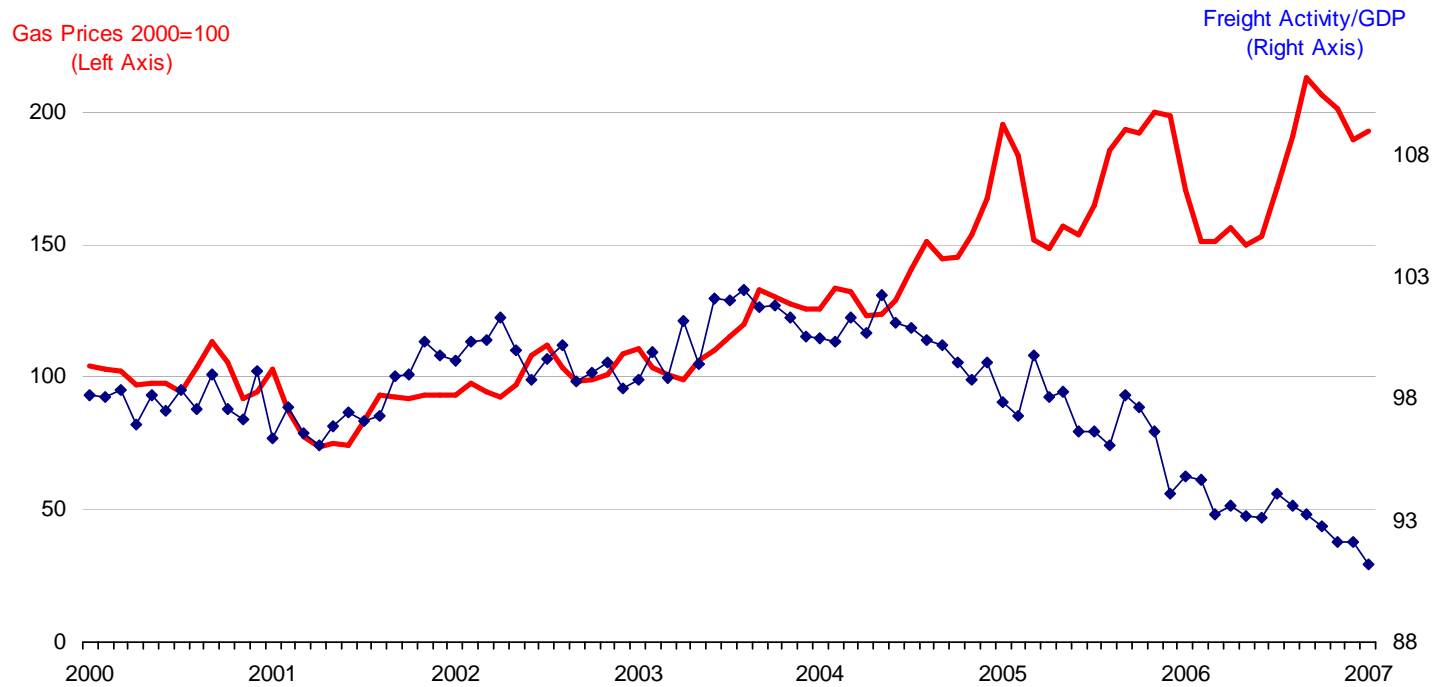
- Freight is no longer an important driver for urban economies
- I-205 exists for through freight
- Freight forecasts are out-dated
- RR Bridge is real issue: unique, seismically vulnerable

# Freight Avoids Peak Travel

- 85 to 90% of Truck Travel Occurs in Non-Peak Hours, or in the Non-Peak Direction
- Daytime Truck Travel is Lowest at Evening Rush Hour
- Trucks schedule and route around congestion—travel time is more important than arrival time

# Freight is Declining as Gas Prices Rise

Regime Change: Higher Gas Prices Reduce Freight Activity



Source: Impresa Analysis of EIA & BTS data

# Move Freight to Rail

- Multi-modal rail: move containers and trailers to rail
- Northwest Container Services has already taken 100,000 trucks off the Interstate between Portland and Puget Sound
- Source: Bryan, Weisbrod & Martland, 2006

# More Freight is Moving to Rail

- Intermodal Container Units are Up
- 2004: 8.07 Million
- 2006: 9.40 Million
- A 16% increase in two-years
- At a time when freight overall was declining relative to economic activity

# Most freight is purely local

- Destination of Outbound Shipments by Weight: Oregon 73.6%
- Origin of Inbound Shipments by Weight: Oregon 62.1%
- Percent of Shipments Traveling Less than 50 miles, by weight: 67.5%

# Most freight is low-value, time insensitive bulk materials

<u>Commodity</u>	<u>Share of Freight</u>
Gravel & Stone	32.8%
Wood Products	17.4%
Non-Metallic Minerals	11.5%
<u>Coal &amp; Oil Products</u>	<u>5.6%</u>
Total, these bulks	67.3%

Source: 2002 Commodity Flow Survey for Portland-Vancouver



# Growing, High Wage Industries Ship Trivial Amounts of Freight

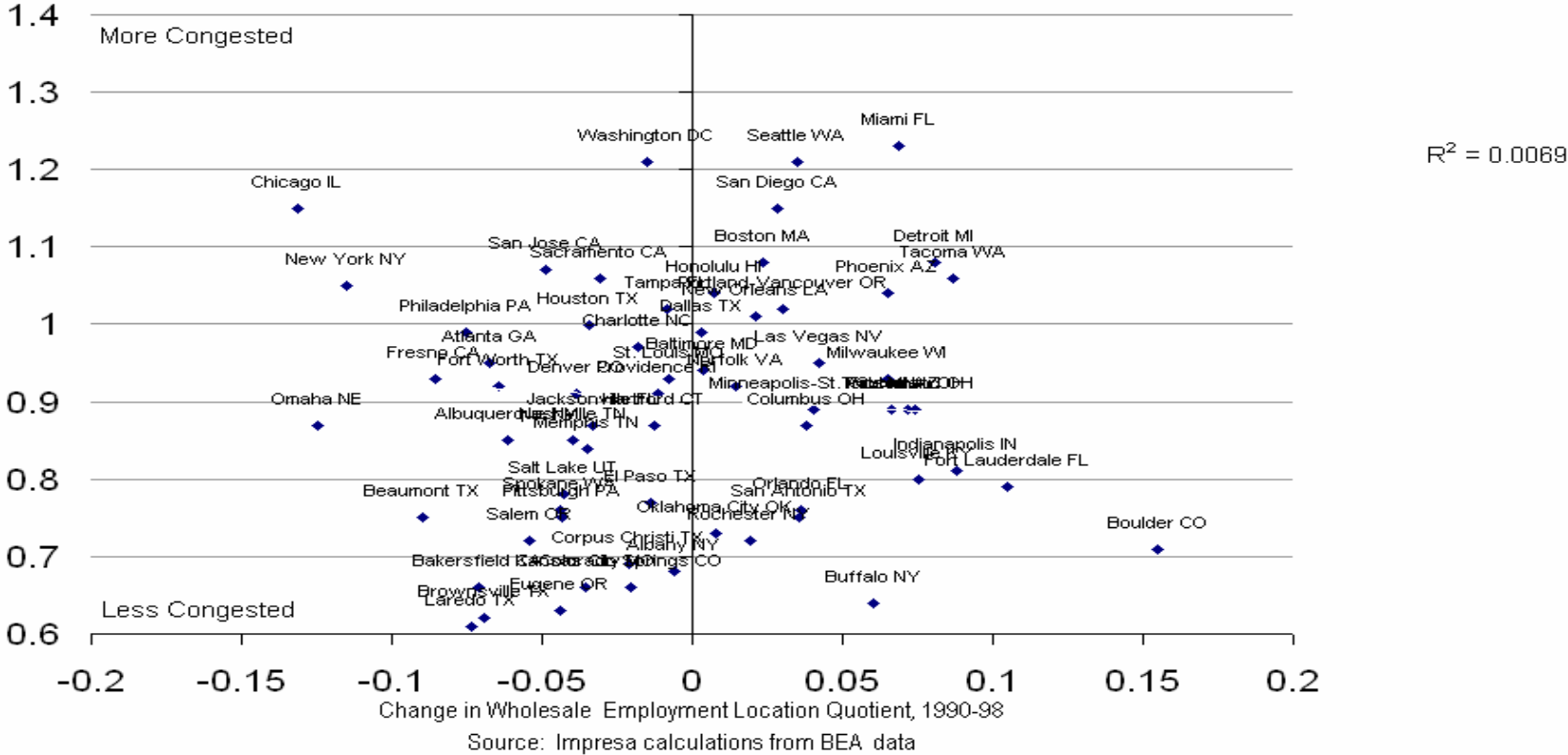
<u>Industry</u>	<u>Pounds/Worker/Day</u>
Minerals	10,000
Wood/Paper	7,348
Food Processing	3,794
Metals	2,243
Apparel	554
Machinery	510
Electronics	50

Source: 2002 Commodity Flow Survey for Portland-Vancouver

# No statistical relationship between congestion and wholesale growth

## Little Relationship Between Congestion & Wholesale Growth

Roadway Congestion Index, 1990 (Texas Transportation Institute)



# Does moving freight matter?

The 90% reduction in freight transportation costs in the past century, and the declining importance of the good-producing sector of the economy, means that in our view, it is better to assume that moving goods is essentially costless than to assume that moving goods is an important component of the production process.”

Ed Glaeser, Harvard, July 2003

“Cities, Regions and the Decline of Transport Costs”

# Seismic Safety

- Current bridge can be retrofitted to meet 2,500 year “No Collapse” standard for \$112-\$193 million
- Project ignores seismic vulnerability of BN railroad bridge (only N/S rail link)

# A Prudent, Phased Pay-as-you-go Alternative

1. Toll the existing bridge
2. Improve transit
3. Fix the railroad bridge
4. Seismic upgrade for I-5 bridge
5. Modify Hayden Island ramps
6. Light rail to Clark County

# Process

- Impossible to review without an EIS in hand.
- Must show assumptions behind demand and traffic forecasts, especially
  - Gas prices & CO2 policies
  - Induced land use change
  - Sensitivity analysis
- Insist on seeing the “investment grade” forecast
- Background documents for public inspection

# SmarterBridge.org



## Coming Soon

Thanks for visiting! - Our new web site with news and information regarding alternatives to the massive and expensive Columbia River Crossing project is under construction. For now, here's some brief information to get started:

**The Portland-Vancouver region is poised to build a \$4.2 billion 12-lane bridge over the Columbia River, to replace the existing I-5 spans.**

The trouble is, the monster bridge won't solve any traffic problems.

Check out why not:

- ♦ **21 bad reasons to build a \$4 billion Columbia River crossing**
- ♦ **Creating a climate-smart I-5 Columbia Crossing** - Coalition for a Livable Future
- ♦ **Bridge to Disaster**, March 13 article in the Portland Mercury by Amy Ruiz

So what to do?

- ♦ **Phased Alternatives - to the big project.**

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