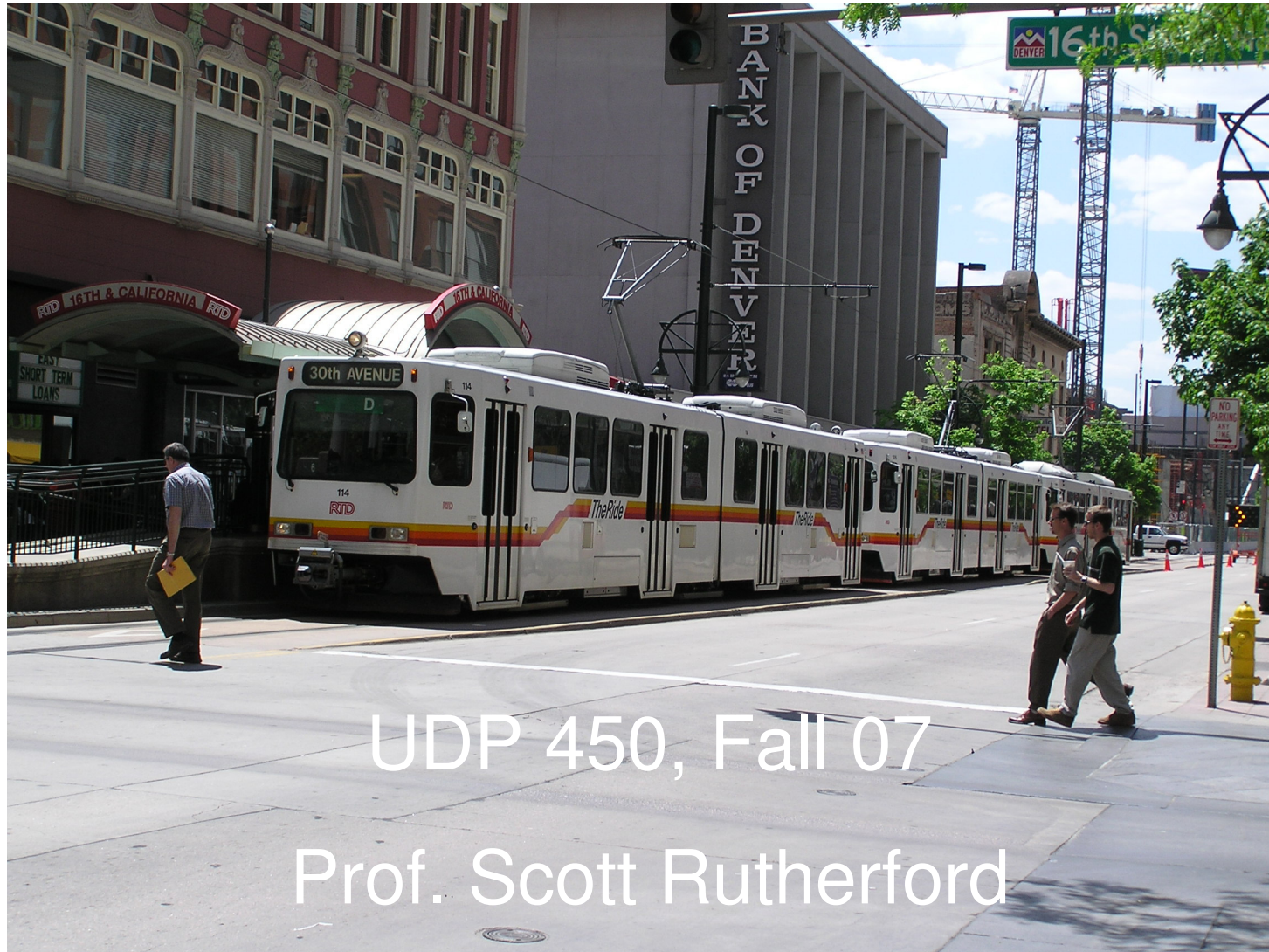


# Urban Transportation Issues

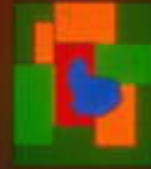


UDP 450, Fall 07  
Prof. Scott Rutherford

## CONGESTION SEVERITY

URBAN AREA	INDEX	RANK
Houston	11,112	1
New Orleans	10,576	2
New York	8,168	3
Detroit	7,757	4
San Francisco	7,634	5
<b>SEATTLE</b>	<b>7,406</b>	<b>6</b>
Los Angeles	6,376	7
Boston	5,538	8
Charlotte	5,263	9
Atlanta	5,034	10
Minneapolis	4,704	11
Dallas	4,630	12
Norfolk	4,505	13
Chicago	4,501	14
Denver	4,454	15
Washington	4,188	16

- Land Use



- Transportation System



- Travel Demand



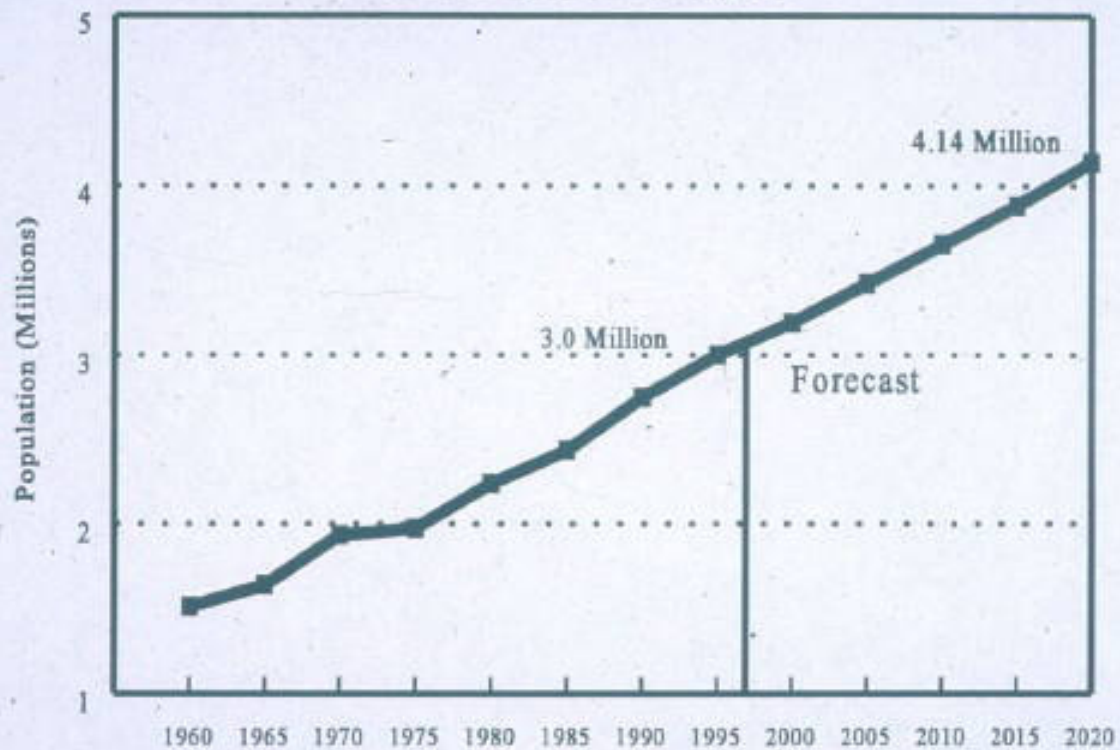


# **PUGET SOUND REGIONAL TRANSPORTATION STUDY**



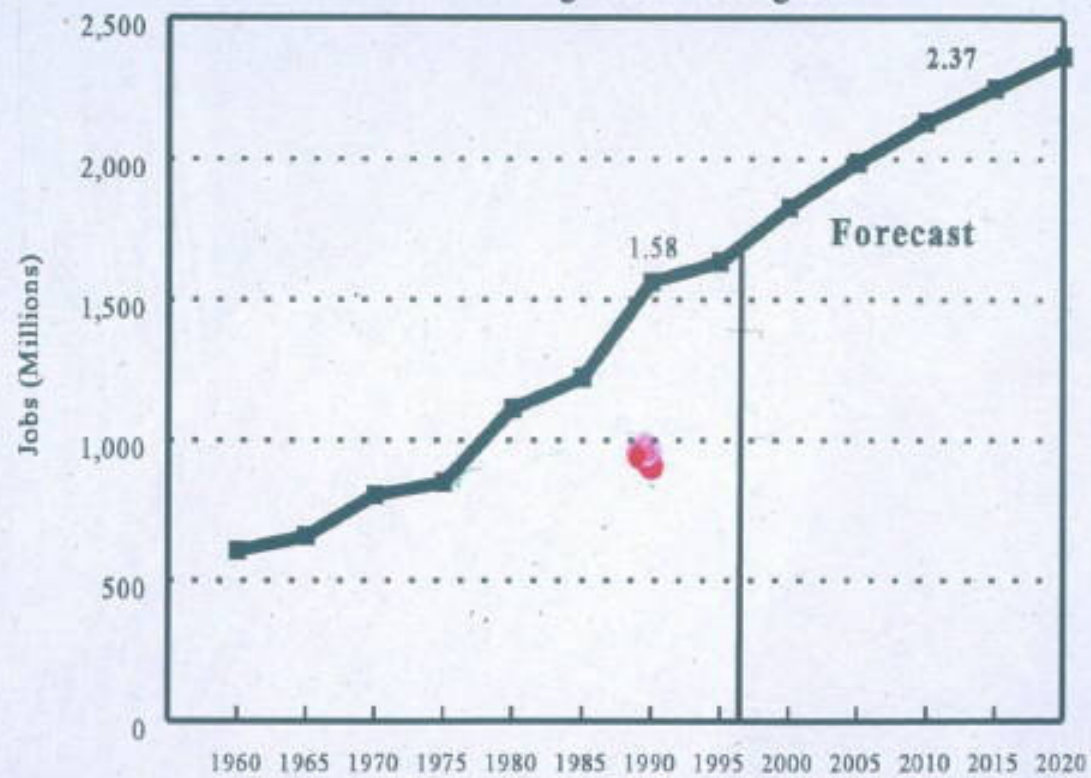
**Summary Report**

## Population Projections Central Puget Sound Region



Source: Puget Sound Regional Council STEP94 regional forecast database.

## Employment Projections Central Puget Sound Region

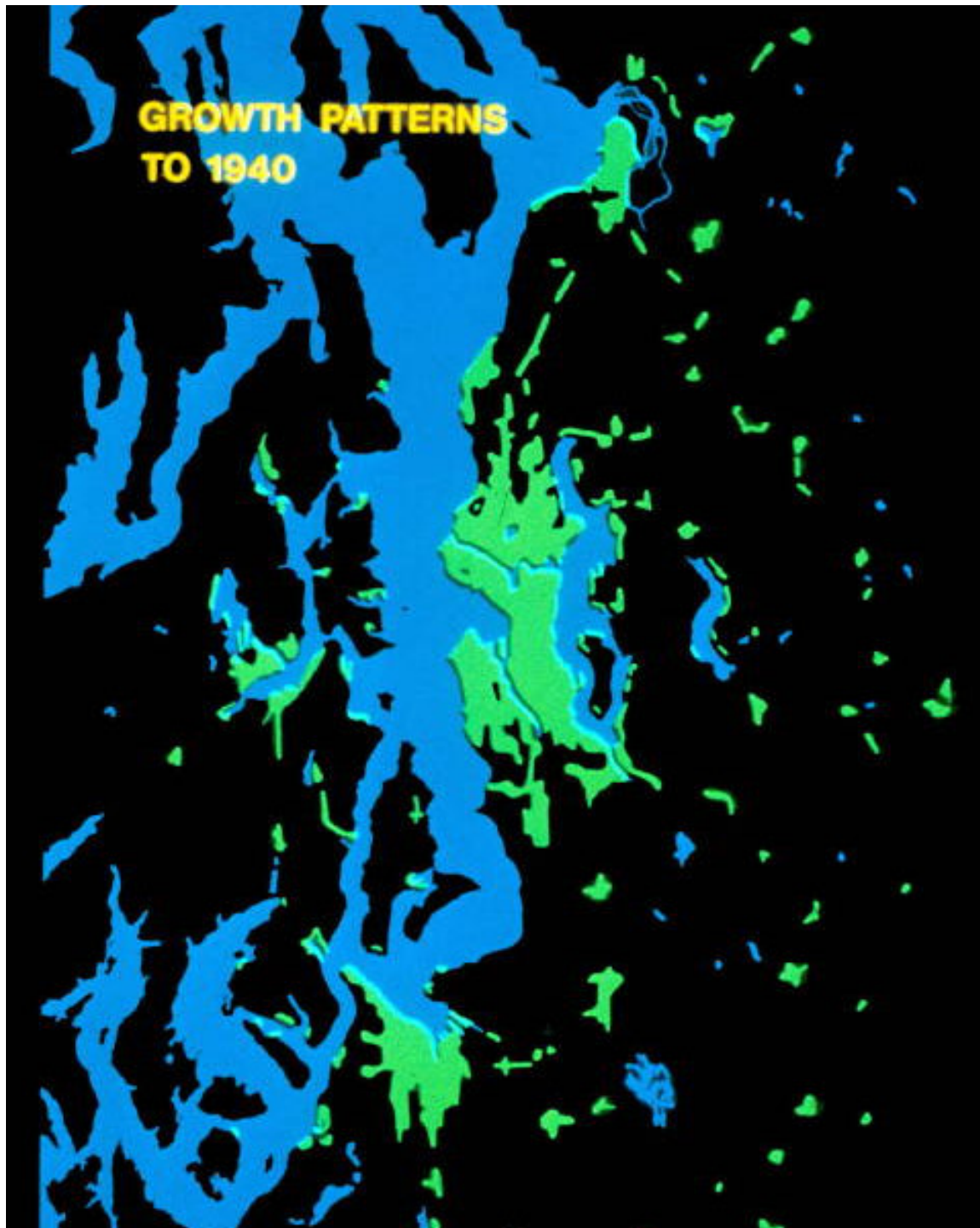


Source: Puget Sound Regional Council STEP94 regional forecast database.



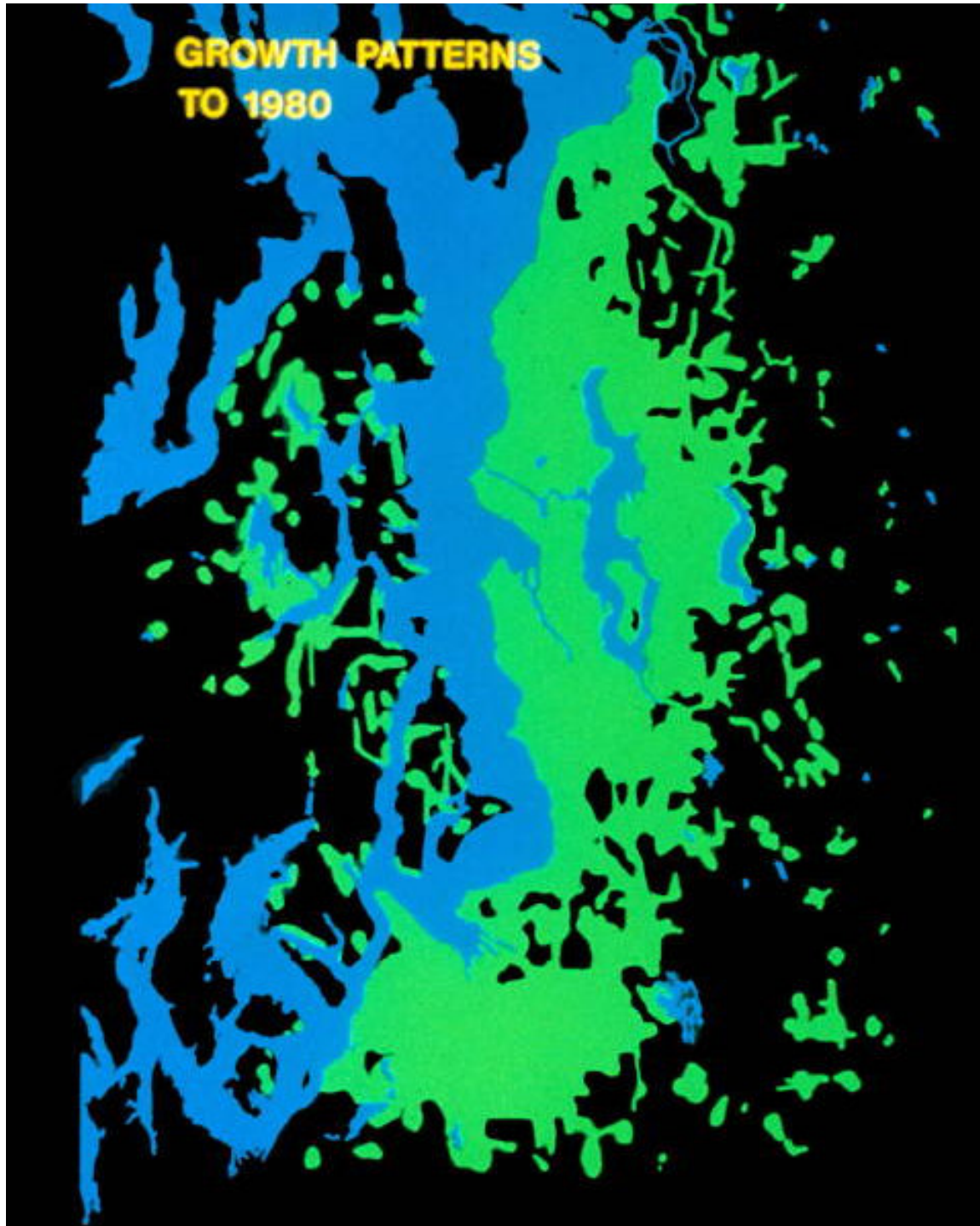


**GROWTH PATTERNS  
TO 1940**

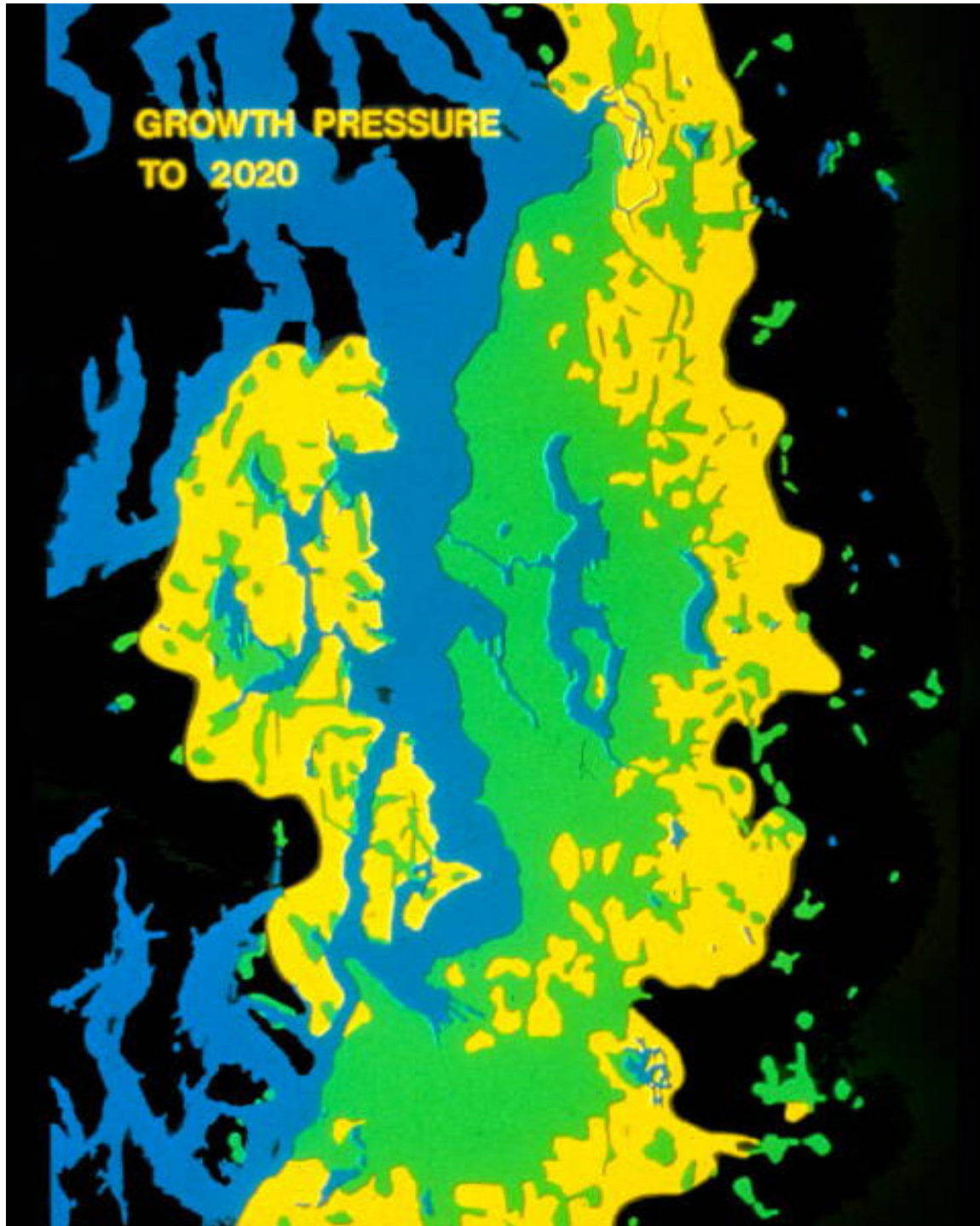




**GROWTH PATTERNS  
TO 1980**



**GROWTH PRESSURE  
TO 2020**









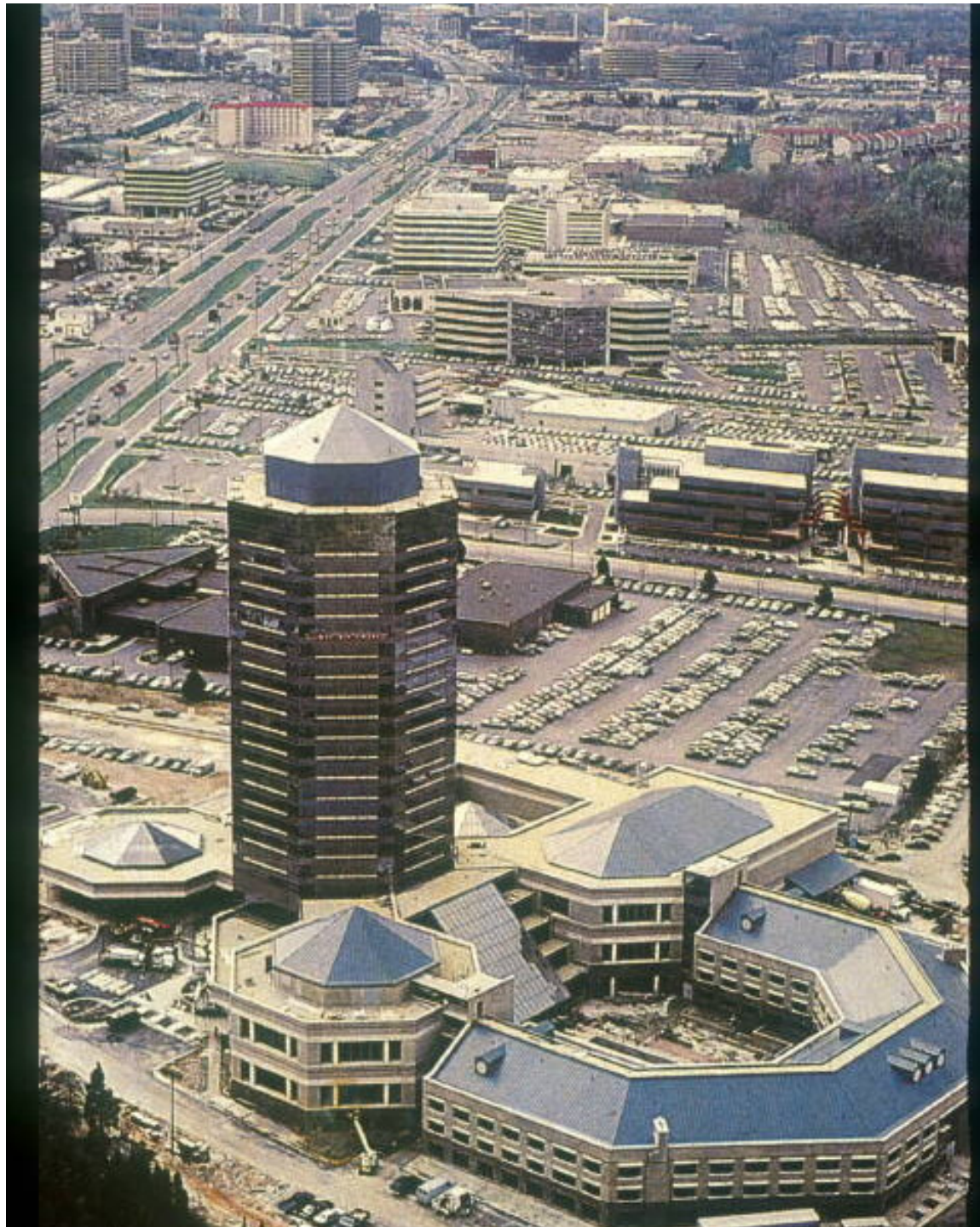












**Land Use**



**Single Occupancy  
Vehicle**



**Congestion**





# VISION 2020

*Growth and Transportation Strategy  
for the Central Puget Sound Region*

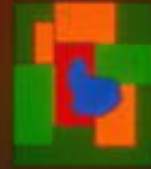








- Land Use



- Transportation System



- Travel Demand















## WHY SHOULD YOU CARE?

Because, unless we act now, we could lose the things we cherish most about this area. When things change, as they always do, it's best to try to control the change, rather than let it control us. Nobody wants to end up with stifling congestion and sprawl like Los Angeles or Seattle. We still have a chance to avoid that. We still have choices.

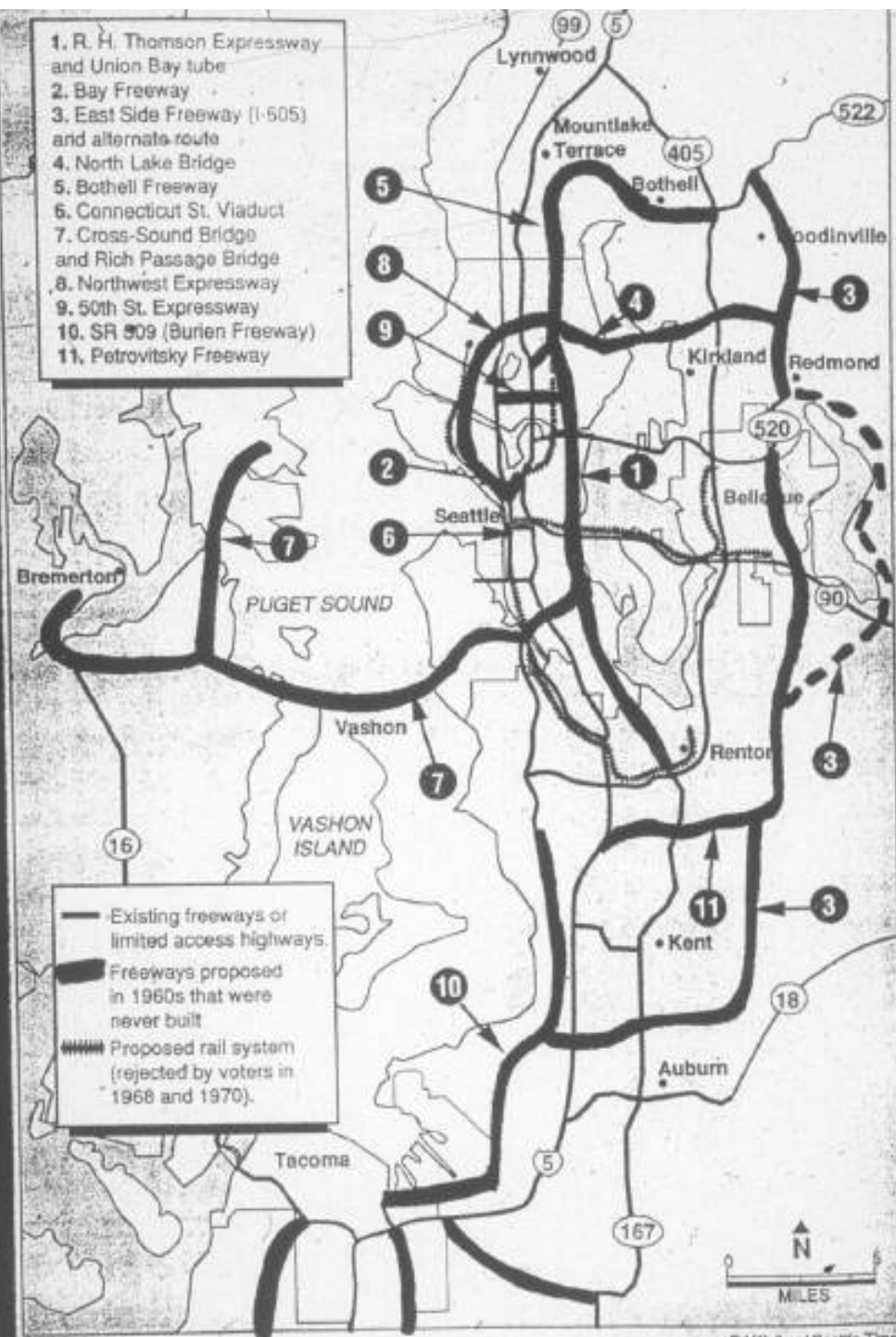


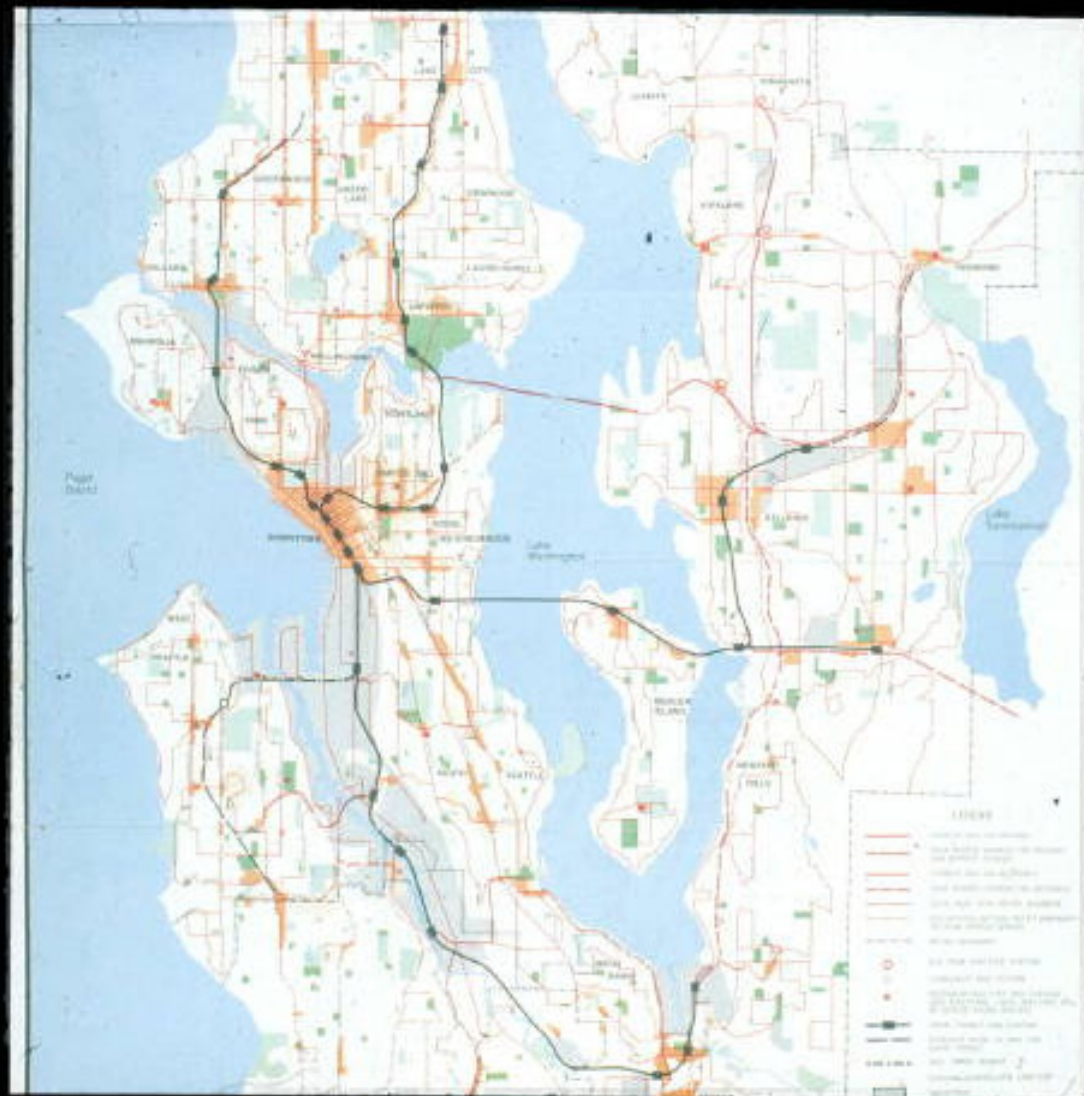


"Let's bring the industry here first, we'll worry about the roads later," he said. "I don't say that about everything. But we've got to do this while we can. This will leave us if we don't jump on it.

PI 2117197

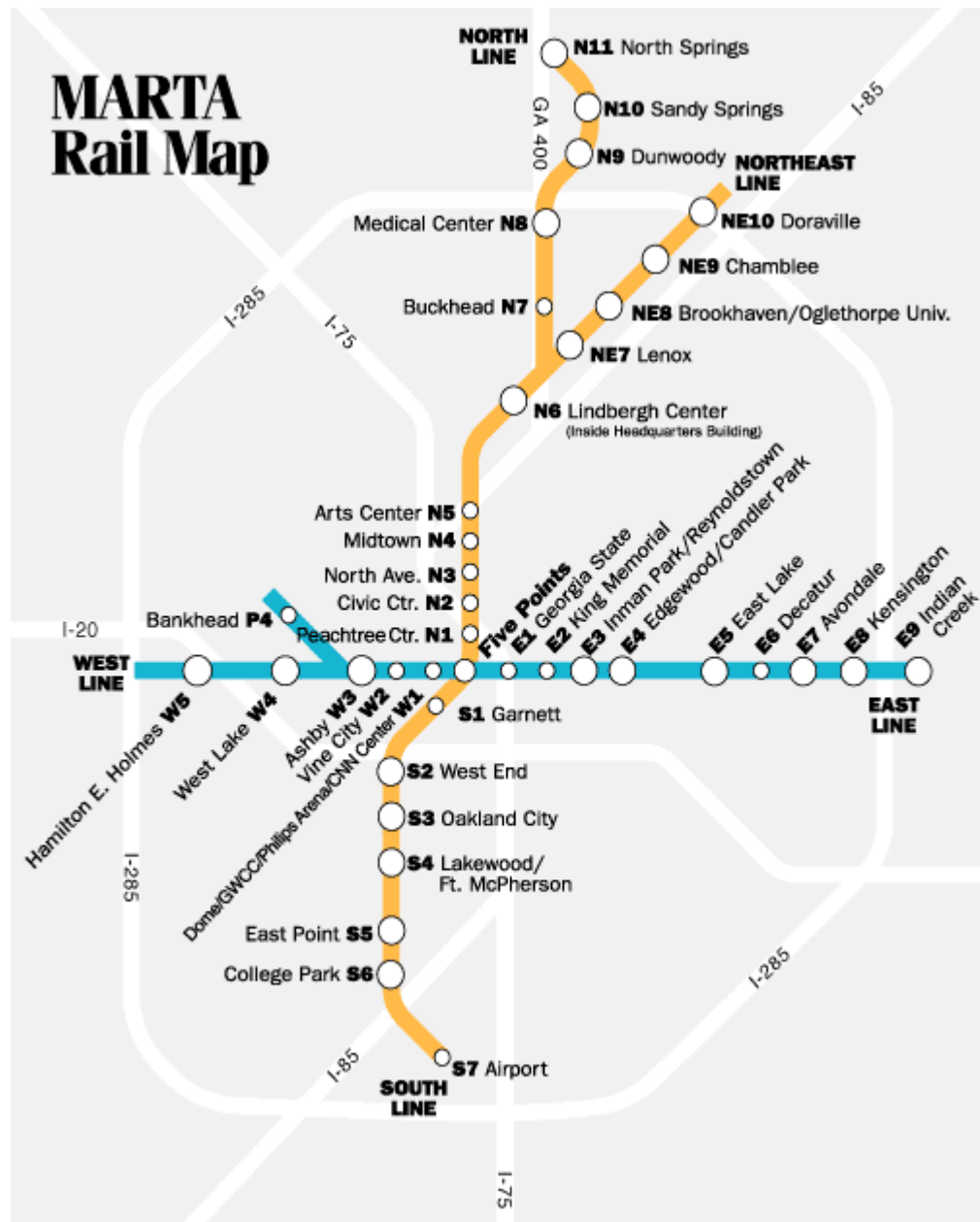
1. R. H. Thomson Expressway and Union Bay tube
2. Bay Freeway
3. East Side Freeway (I-505) and alternate route
4. North Lake Bridge
5. Bothell Freeway
6. Connecticut St. Viaduct
7. Cross-Sound Bridge and Rich Passage Bridge
8. Northwest Expressway
9. 50th St. Expressway
10. SR 909 (Burien Freeway)
11. Petrovitsky Freeway







# MARTA Rail Map



# Residents say 'no' to Metro

By ANDRA MARHEFKA

Maple Leaf residents have successfully pulled the brakes on a proposal that would have permitted Metro to lease space from a church at 844 N.E. 78th St., for a "Park and Pool."

Fairview Church, which was initially receptive to the lease arrangement, told Metro to look elsewhere after a community meeting Oct. 24 revealed unanimous opposition to it.

"Metro has been looking for a parcel to relocate commuter van pools which currently utilize the Green Lake Park and Ride, located at I-5 and Northeast 65th Street, which has become too crowded. A van pool carries between 10 to 15 riders and usually operates only on weekdays during peak commuter hours: 6:30 a.m. to 8:30 a.m. and 3:30 p.m. to 5:30 p.m. Riders park their cars and catch their commuter vans at Park and Pool lots.

Metro likes to rent space from churches or grocery stores for its van pools because it's cheaper. Construction of a new park and ride facility costs upwards of \$5,000 a stall.

In its proposed contract, Metro offered to pay Fairview Church \$160 a month for use of a quarter lot of



Photo/Greg Far

The Rev. Jim Lyons stands in the parking lot at Fairview Church where Metro proposed leasing for a Park and Pool. After loud neighborhood opposition to the plan, the church rejected the idea.

# Big quake could ruin Ship Canal Bridge

Parts of upper deck might fall onto reversible lanes

By Mark Higgins  
P.I. Reporter

While scientists continue to amass evidence of a shallow geologic fault under Seattle, engineers have discovered that a major earthquake could rattle the Interstate 5 Ship Canal Bridge so hard that pieces of its upper deck could slip free and rain down onto the freeway's lower reversible lanes.

A new seismic bridge study published by the state Department of Transportation says a severe, 7.5-magnitude earthquake could "compromise the survival" of the Ship Canal Bridge.

"Most of the structure will experience severe damage, with several portions likely to collapse," the report by Seattle consultants Andersen Bjornstad Kane Jacobs, Inc. says.

The bridge girders, trusses and support columns appear to be most vulnerable, according to the report.

Depending on the quake's duration, "it's very likely there would be major damage," to the bridge, said Ed Henley, the Department of Transportation's bridge planning engineer.

If the 12-lane bridge were disabled, Seattle's cantankerous traffic would be hopelessly tied in knots. The bridge, which opened in 1962, today carries more than 160,000 cars a day and is an integral link in the region's overburdened freeway system.

The new seismic study is not intended to be alarmist, highway officials say. It contains

specific ideas on how the state can retrofit the 31-year-old bridge to make it more earthquake-resilient.

The report says before any changes are made, a reassessment should be done to determine the effectiveness of the various retrofit schemes, which could cost up to \$9 million.

Engineers and seismologists agree the Ship Canal Bridge is not the only structure that would be damaged by a 7.5 earthquake. A magnitude-7 earthquake is considered "major," and a quake registering an 8 would cause tremendous damage.

For the purposes of the report, a 7.5 quake was used because its potential force would stress the structure to its limits.

See **BRIDGE**, Page A13



# Suburb keeps fighting pass-through bus lane

By **GEORGE FOSTER**

P-I REPORTER

A state senator from Lake Forest Park and the mayor of that Seattle suburb have not given up on an 11-year fight against construction of a transit lane along congested Bothell Way.

great cost.

In neighboring Shoreline, City Council members voted Monday night to delay up to 18 months a decision on a state-county-city project to put in a transit lane along Aurora Avenue North. Their reason: an unfinished city transportation plan.

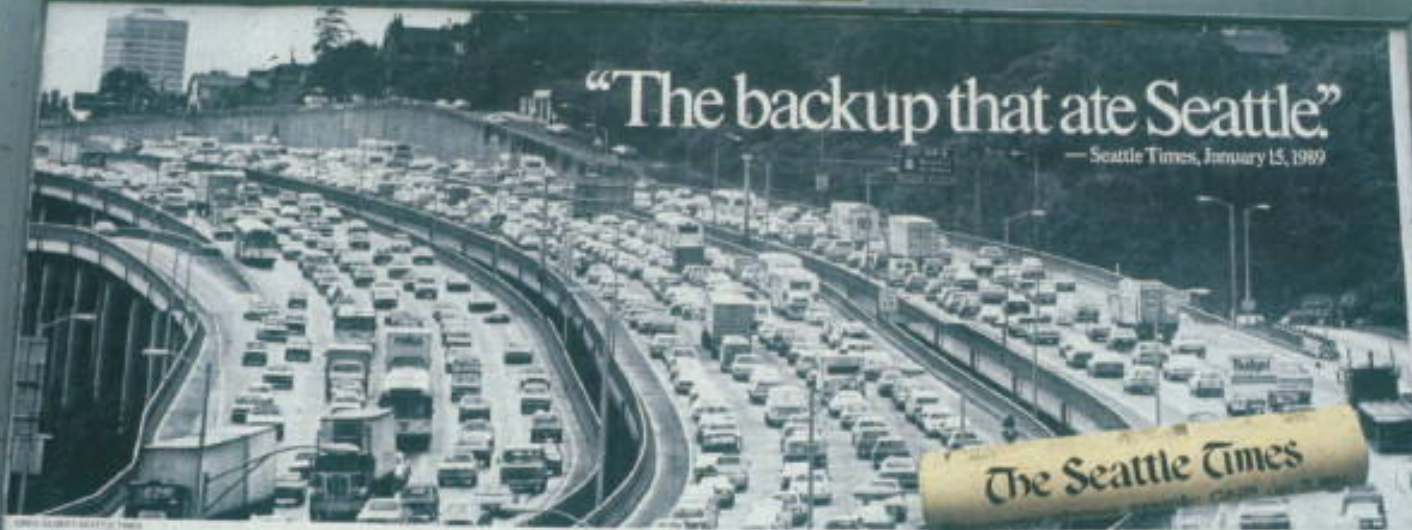
The situations differ in Shoreline







ACKERLEY



# "The backup that ate Seattle."

— Seattle Times, January 15, 1989

The Seattle Times

Have you seen The Times today? Call 624-READ.







**7-9:30 AM**

MONDAY - FRIDAY  
EXCEPT HOLIDAYS

**WRONG  
WAY**

**4-6:30 PM**

MONDAY - FRIDAY  
EXCEPT HOLIDAYS



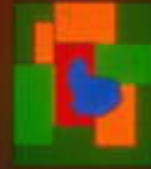
**ALL OTHER TIMES**







- Land Use



- Transportation System



- Travel Demand

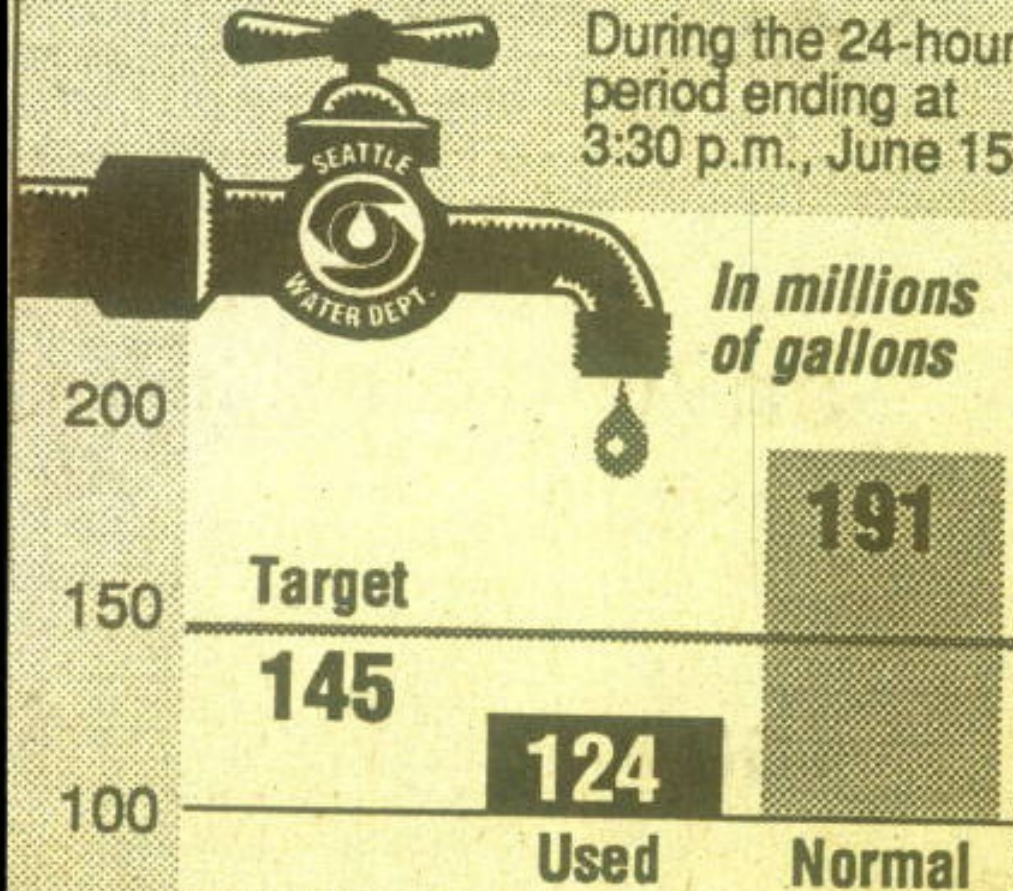






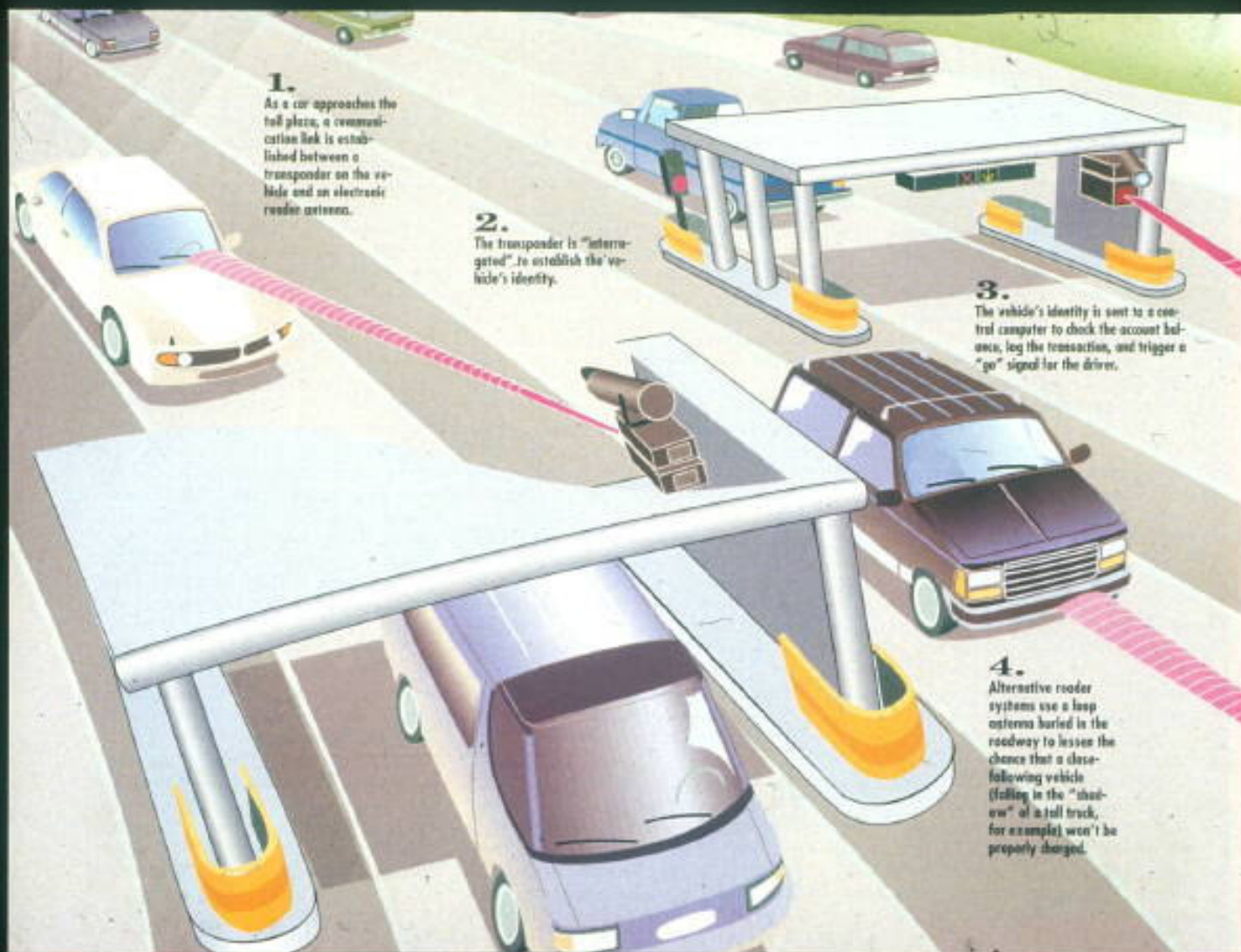
# The daily water meter

During the 24-hour  
period ending at  
3:30 p.m., June 15



*Supplied by the Seattle Water Dept. to the City of  
Seattle and 27 suburban cities and water districts.*





**1.**

As a car approaches the toll plaza, a communication link is established between a transponder on the vehicle and an electronic reader antenna.

**2.**

The transponder is "interrogated" to establish the vehicle's identity.

**3.**

The vehicle's identity is sent to a central computer to check the account balance, log the transaction, and trigger a "go" signal for the driver.

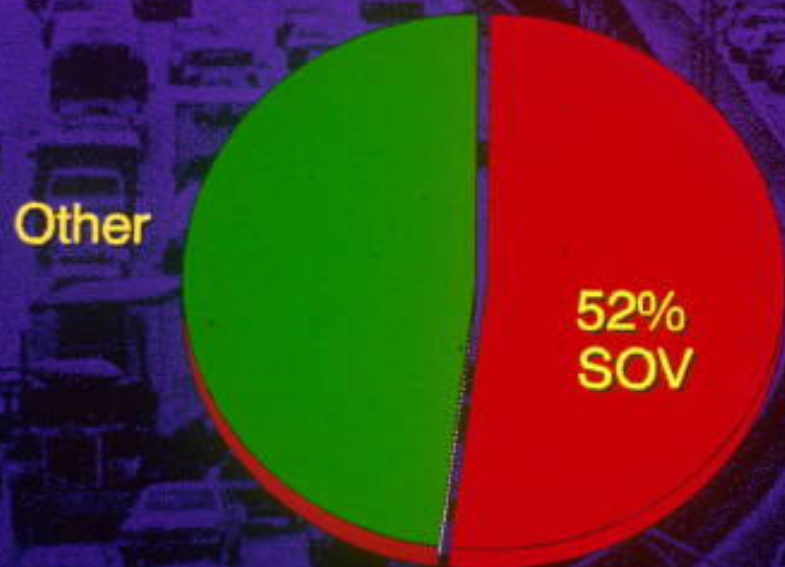
**4.**

Alternative reader systems use a loop antenna buried in the roadway to lessen the chance that a close-following vehicle (following in the "shadow" of a toll truck, for example) won't be properly charged.





## CH<sub>2</sub>M Hill



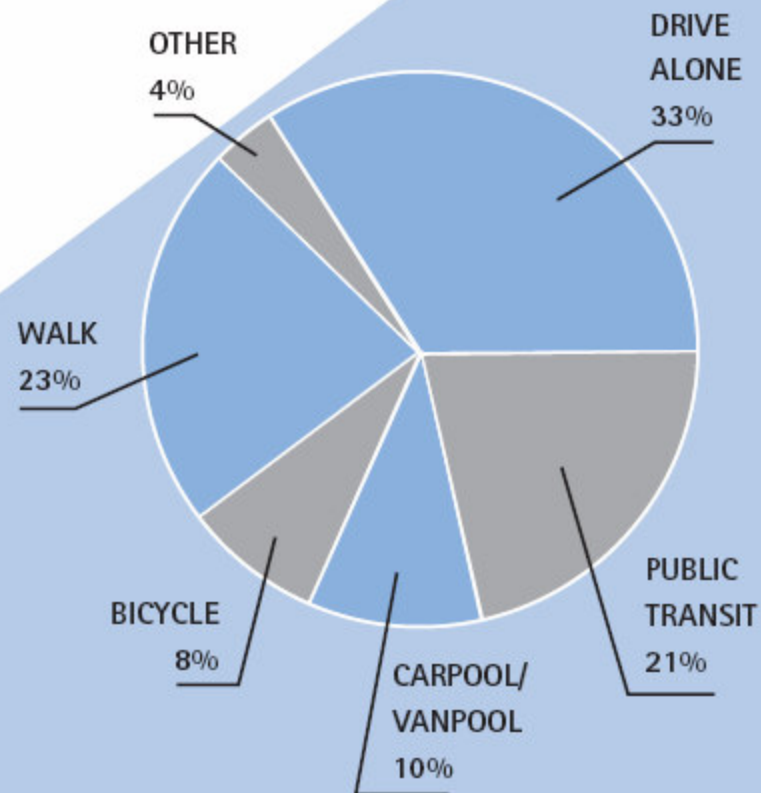
Bellevue, WA

Area SOV = 81%

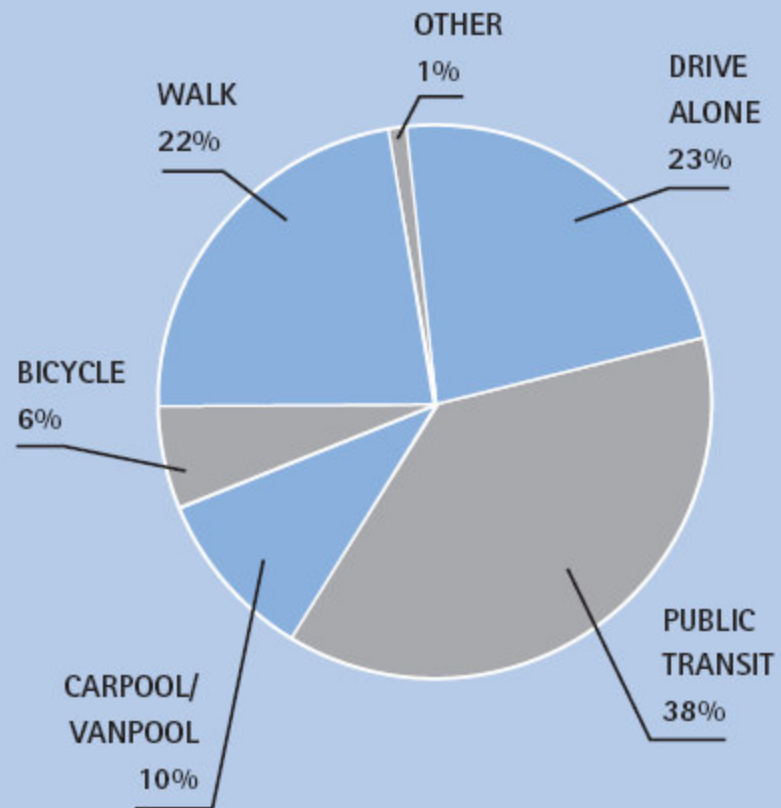
## TRANSPORTATION SURVEY

The 2004 U-PASS Survey indicated that 94 percent of U-PASS holders were very satisfied or somewhat satisfied with the program, up from 86 percent in 1993.

**WEIGHTED AVERAGE 1989**



**WEIGHTED AVERAGE 2004**







## PARKING

**SOV  
Permits**



**24%**

7,400 → 5,400

**Parking  
Utilization**



**17%**

800 Empty Student  
Spaces



**THE END**

