

Zeroing in on Urban Development Capacity

Washington APA Conference

November 13, 2009



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- How much land is needed?
 - What lands are likely to accommodate growth?
 - What will be built on those lands?

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- Buildable Lands Program

Buildable Lands Counties

- The Buildable Lands Program was added to GMA in 1997 (RCW 36.70A.215)
- Six counties required to prepare reports every 5 years



Buildable Lands Planning

1. Adopt County-Wide Planning Policies
2. Adopt Procedures
3. Data Collection
4. Evaluation Report
5. Reasonable Measures
6. Annual Monitoring



Tim Stewart on the
importance of
reliable tools



**"So what's this? I asked for a *hammer*!
A hammer! *This* is a crescent wrench! ...
Well, maybe it's a hammer. ... Damn these stone
tools."**





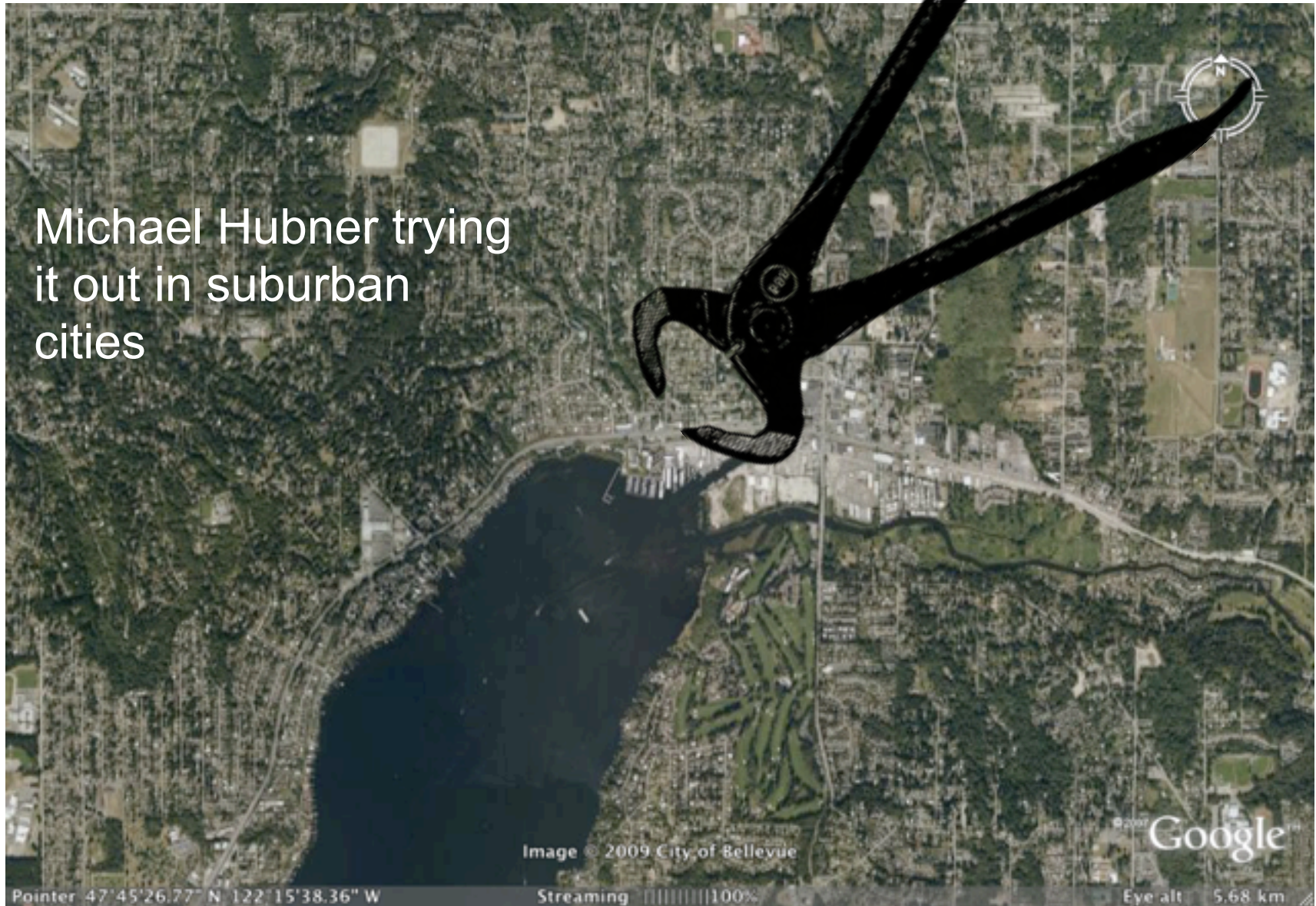
Alex Cohen on a new
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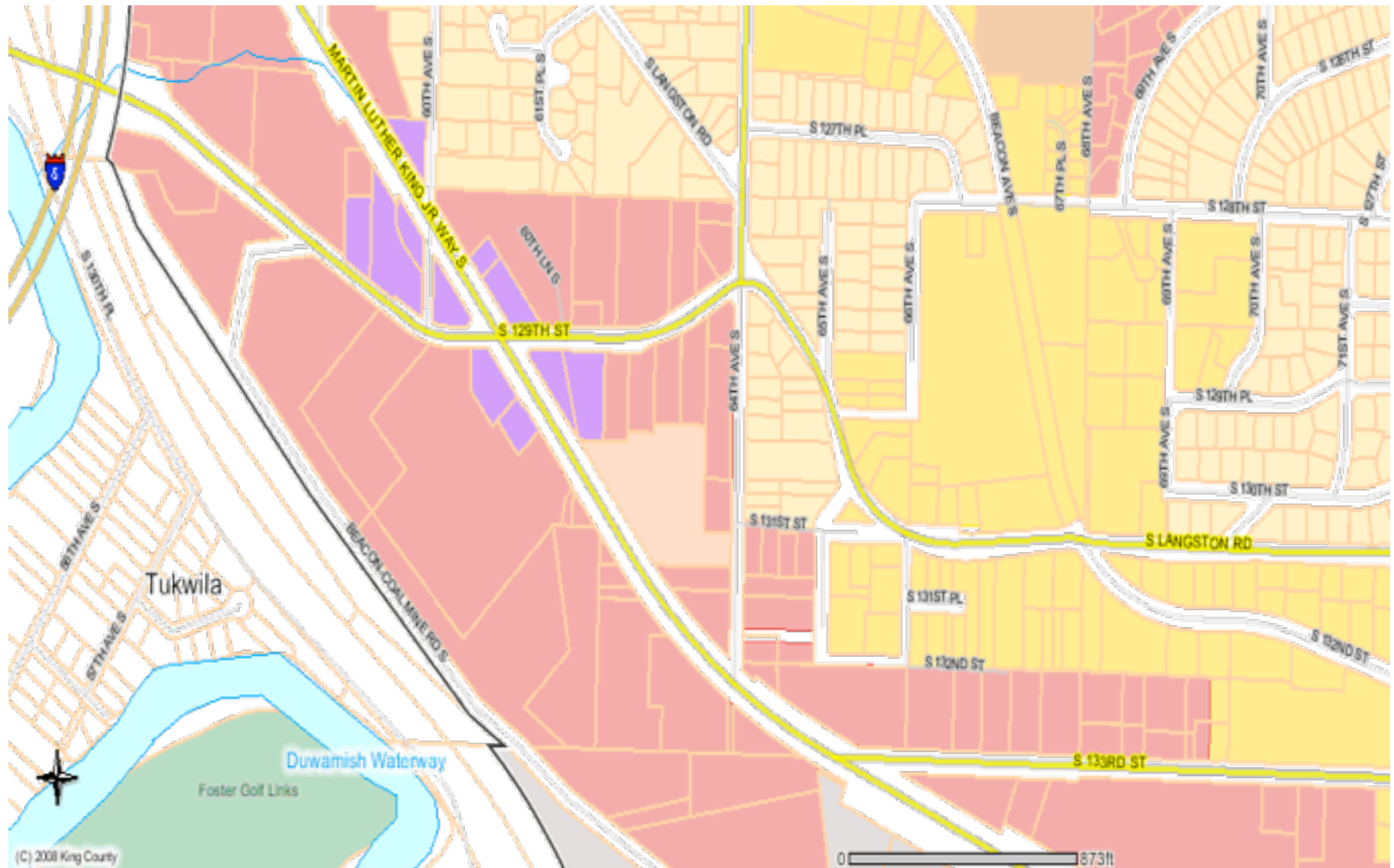
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Michael Hubner trying
it out in suburban
cities



Land Supply Inventory



- Parcel level analysis

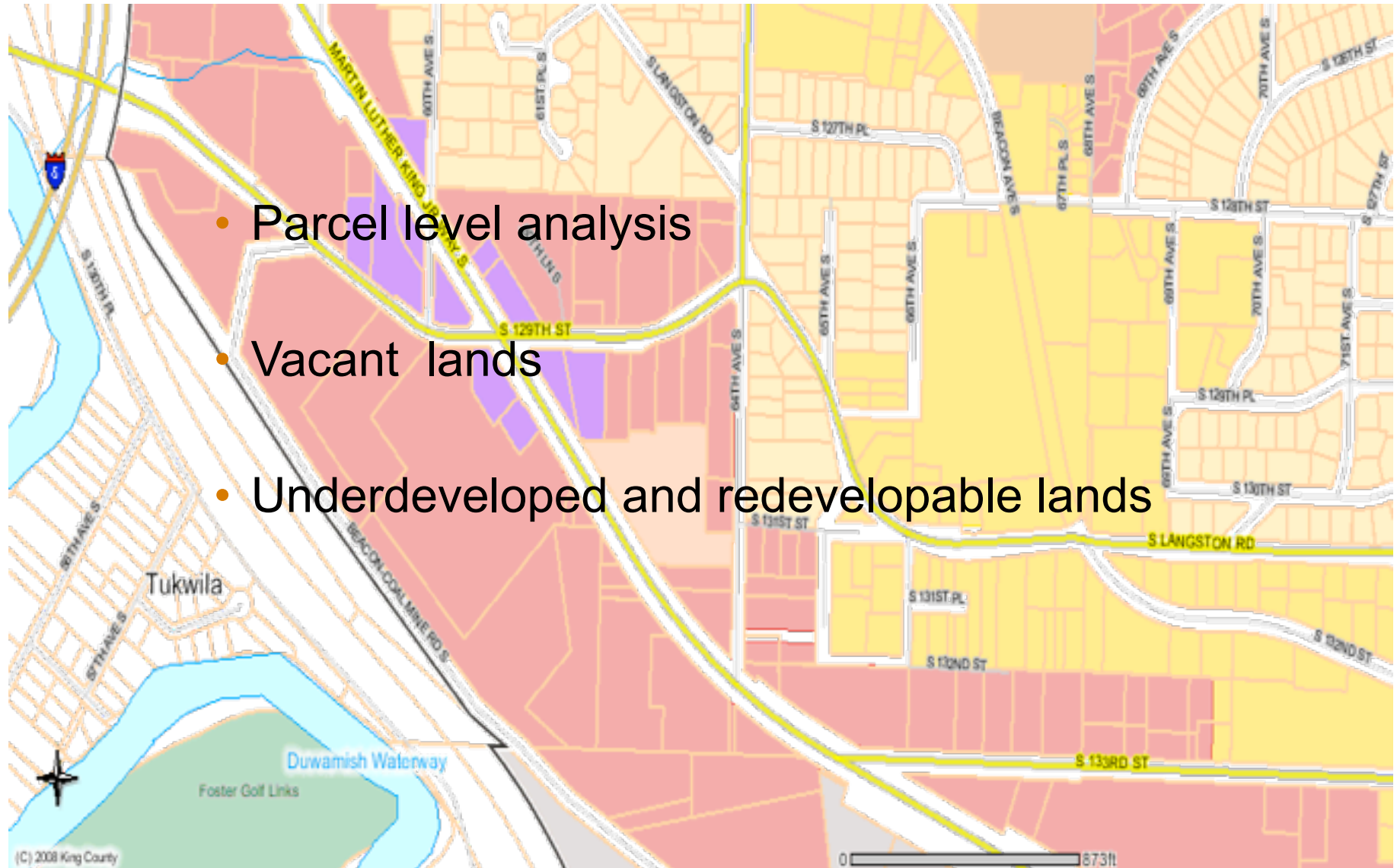


- Parcel level analysis
- Vacant lands



Land Supply Inventory

- Parcel level analysis
- Vacant lands
- Underdeveloped and redevelopable lands



Vacant Land



“Underdeveloped” Land



“Underdeveloped” Land

- Has some development but zoning would allow more



“Underdeveloped” Land

- Has some development but zoning would allow more
- Most developed land meets this definition



What Land Is Likely to Redevelop?

- Property constraints
 - Lot area
 - Zoning
 - Existing development
- Market forces
 - Dynamic and cyclical
 - Reflected in development behavior

Raw Materials

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- Parcel and parcel data in GIS
 - Lot size, current land use, building area, number of units

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- Permit data
- Observations and specific plans

Assessed value and ILR

- Improvement value/land value=ILR

Example:

Improvements assessed value = \$100,000

Land assessed value = \$300,000

ILR = 33%

Evaluating Market Forces

- ILR Compares value of land and improvements
 - $ILR < 50\%$ = Likely to redevelop
 - Buildable land inventory goes up and down with assessed land values
- What are some non-fluctuating characteristics of properties that have been redeveloped?
- What characteristics do properties that were redeveloped have in common?
- Can these be correlated with zoning?

Why this model may be important for Cities and Counties which are not “Buildable Lands”

- Density is at the center of many of our land use conflicts.
- “Planned Density” v. “Achieved Density”
- Procedures for projecting future development capacity will be disputed by those who do not like the outcomes.
- Moving toward a more rational model for assuming future density may narrow the scope of the disputes.

Three traditional problems with projecting density

- Outdated zoning which is inconsistent with the built environment
- Unrealistic Expectation of future density
- Inadequate infrastructure needed to support future development.

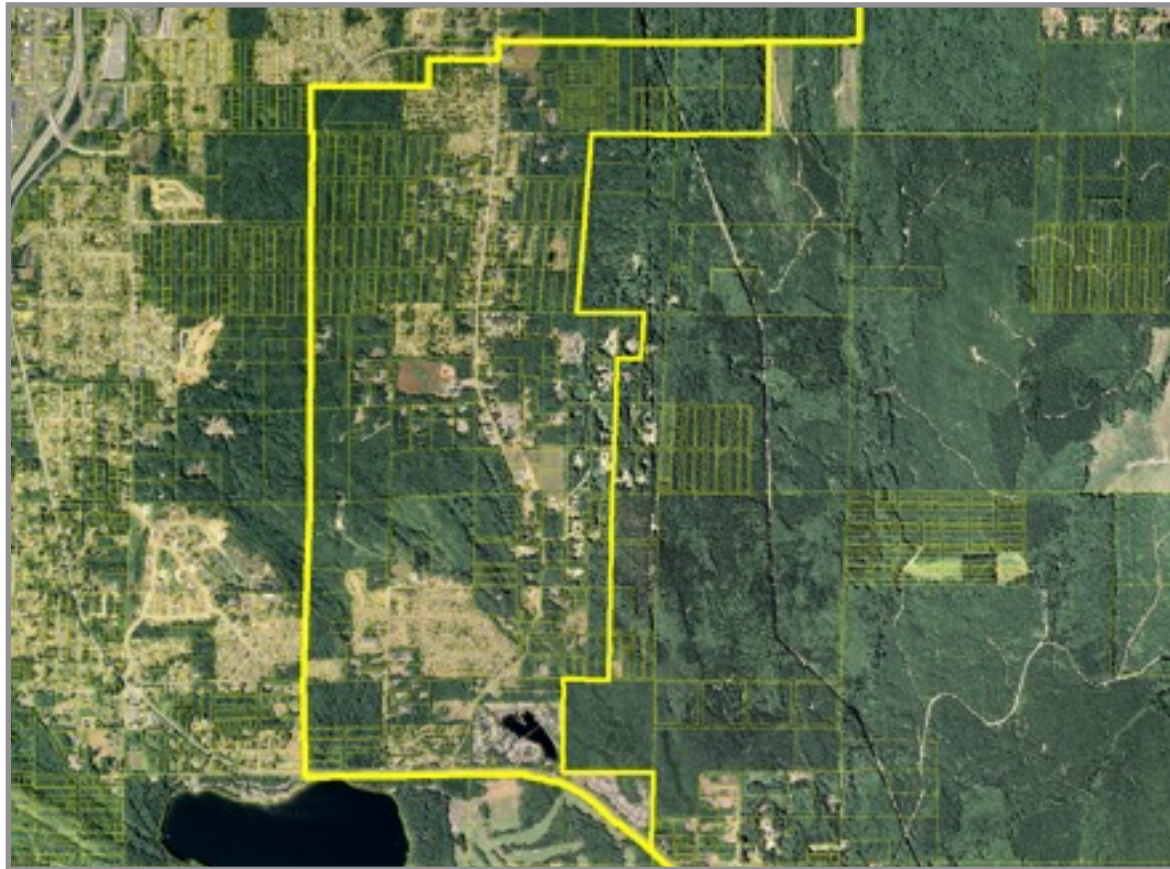
Outdated Zoning which is Inconsistent with the Built Environment



Unrealistic Expectations of Future Density



Inadequate Infrastructure Needed to Support Future Development



Seattle Redevelopment Study

Developing the Model – An Alternative to the ILR

- Focus:
 - Commercial and MF re-development
 - past behavior in private development
 - stable property characteristics
- Provides basis for selecting properties to include in land supply inventory
- Relationship as predictive tool?



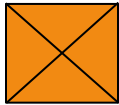
Proposed Model: Density Ratio

- The Density Ratio is the ratio of an existing building characteristic to the redeveloped characteristic

$$\text{Density Ratio} = \frac{\text{Existing Parameter}}{\text{Redeveloped Parameter}}$$

Calculating the Density Ratio

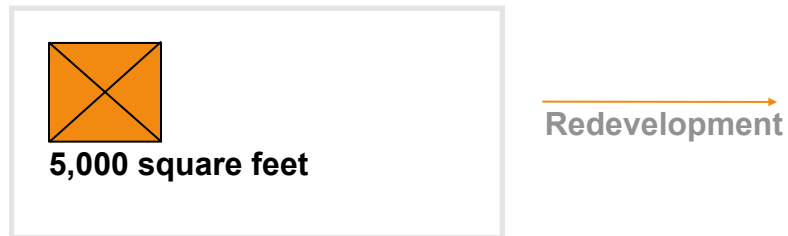
Parcel X: Existing Condition



5,000 square feet

Calculating the Density Ratio

Parcel X: Existing Condition



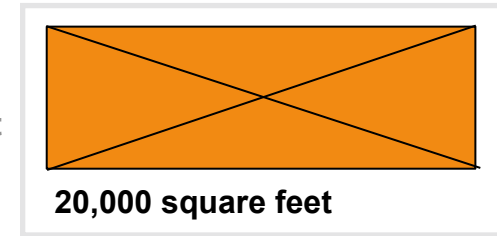
Calculating the Density Ratio

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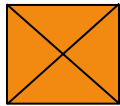
Redevelopment

Parcel X: Redeveloped Condition



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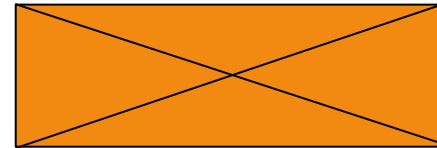
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Redevelopment

Parcel X: Redeveloped Condition



20,000 square feet

$$\text{Density Ratio} = \frac{5,000}{20,000} = 0.25$$

Analysis Question

- Is there a Density Ratio threshold that is observable in the historical permit record that would indicate when redevelopment is likely?

Methods – Data Sources

- City of Seattle residential building permit data 1997 – 2007
- City of Seattle commercial building permit data 1997 - 2007
- 1997 King County parcel layer
- 1997 King County assessors extracts (the oldest KC data available)

Methods – Major Steps

1. Using 1997 and 2007 City Permit Data and King County Assessors Data - Identify redevelopment projects from 1997 – 2007
2. Determine existing building parameters (units or square feet) – **County Assessors Data**
3. Determine redeveloped building parameters (units or square feet) – **City Permit Data**
4. Calculate Density Ratio

Redevelopment Defined

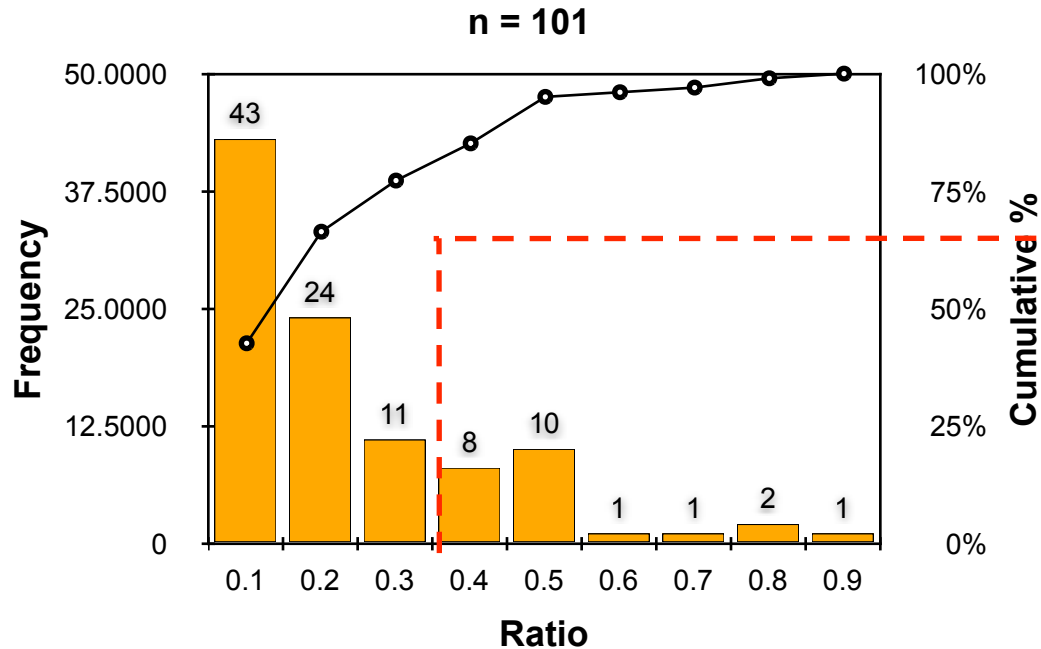
- Residential Redevelopment Projects =

No. New Units > No. of Existing Units

- Commercial Redevelopment Project =

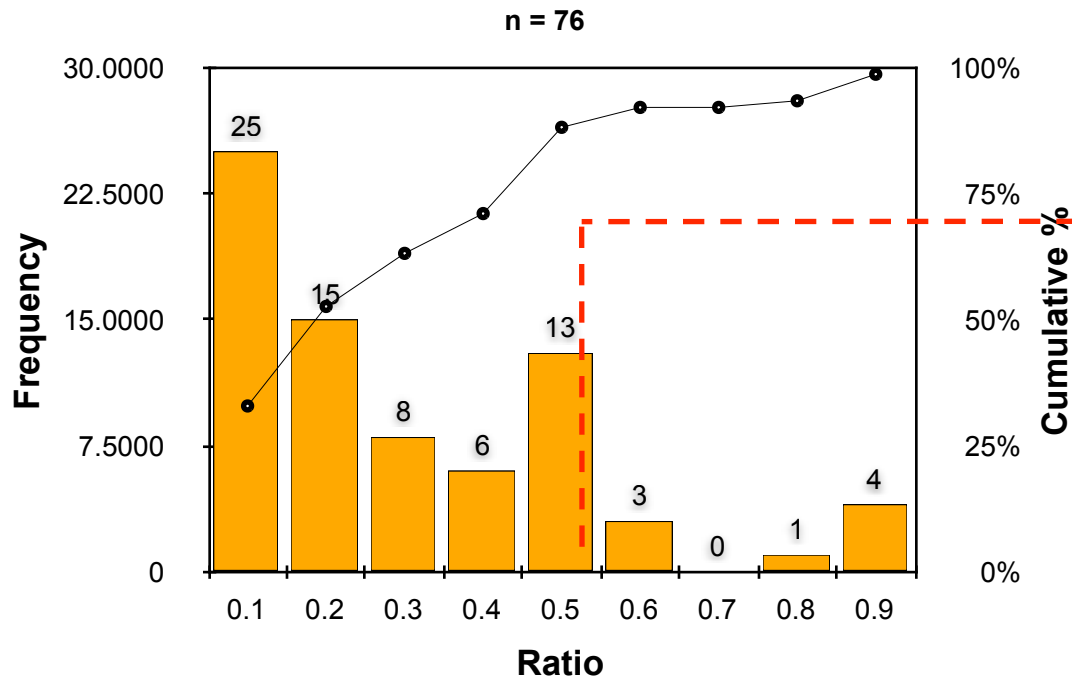
Final structure was > 2x the square footage of the existing structure

Results – Residential Units C, NC and MR Zones



Density Ratio Threshold = 0.3

Results – Commercial Square Feet C and NC Zones



Density Ratio Threshold = 0.4

Testing the Model

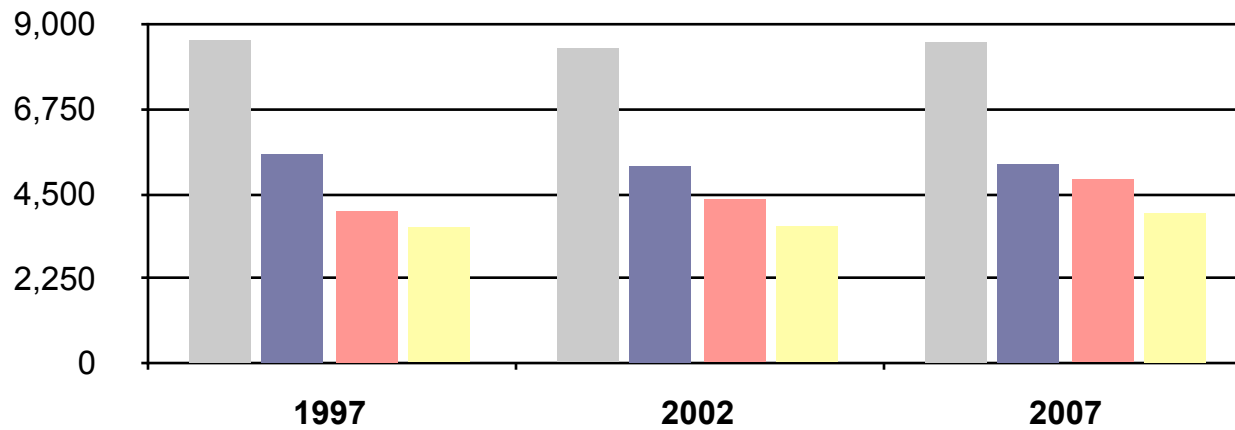
- Test sample included all C and NC zoned properties in Seattle
- Calculated DR for 1997, 2002 and 2007
- Calculated ILR for 1997, 2002 and 2007
- Compared results from each method

Data Sources

- ILR:
 - Improvement Value: King County Assessor
 - Land Value: King County Assessor

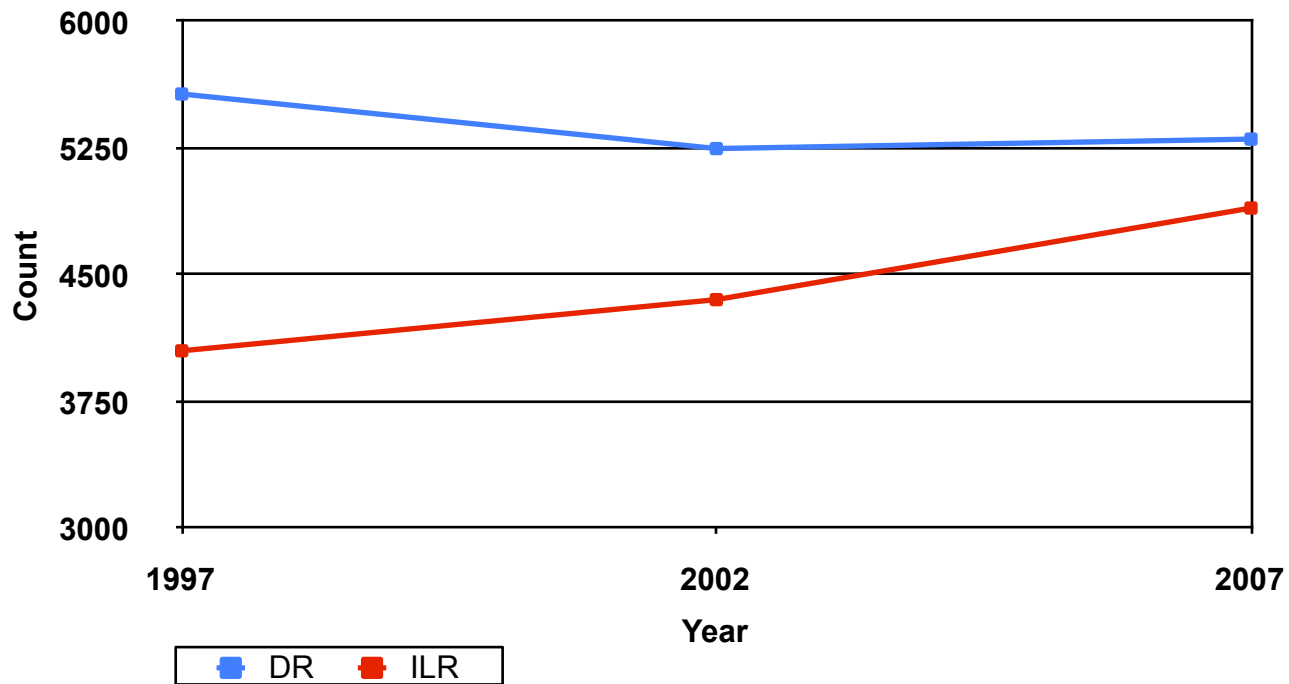
- DR:
 - Existing Condition – King County Assessor
 - Gross square feet and Residential Units (converted to sf)
 - Future Condition - Seattle Development Capacity Assumption Model
 - Based on observed development not max capacity

Results

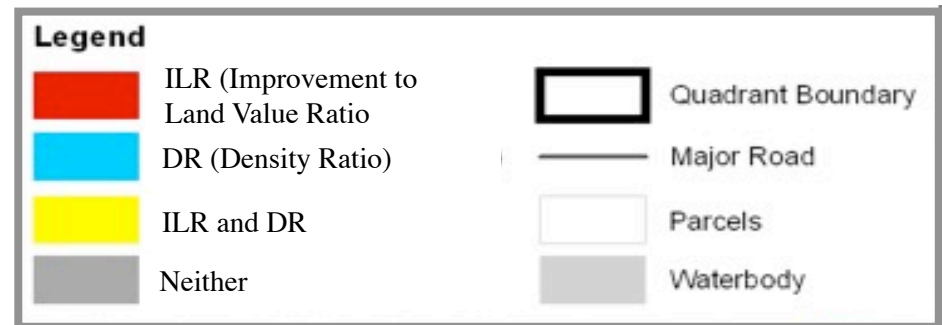
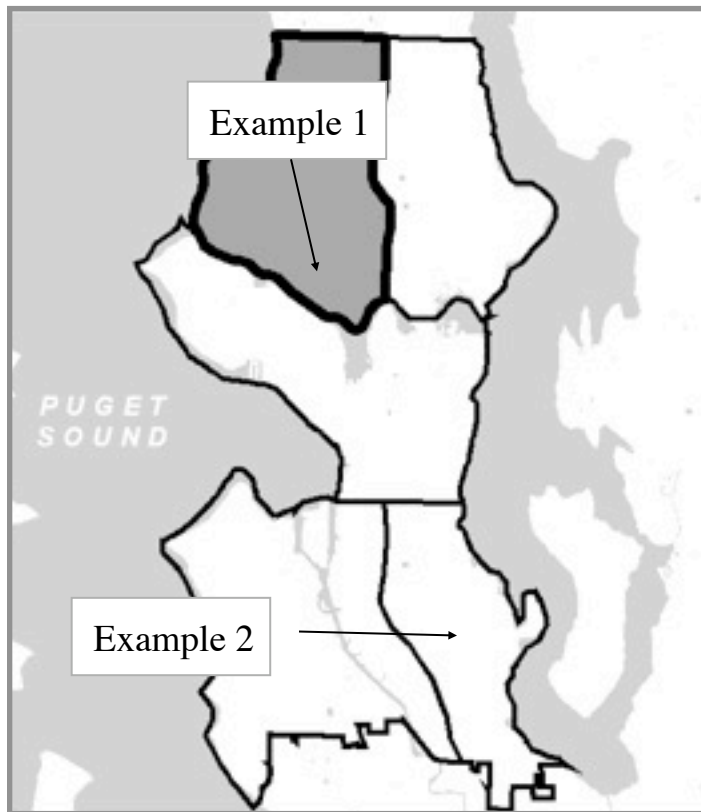


- DR identified ~ 10 – 15% more properties

Trend Comparison



Mapping the Results



Geographic Variation - NW

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1997



Geographic Variation - NW

1997

2002



Geographic Variation - NW

1997

2002

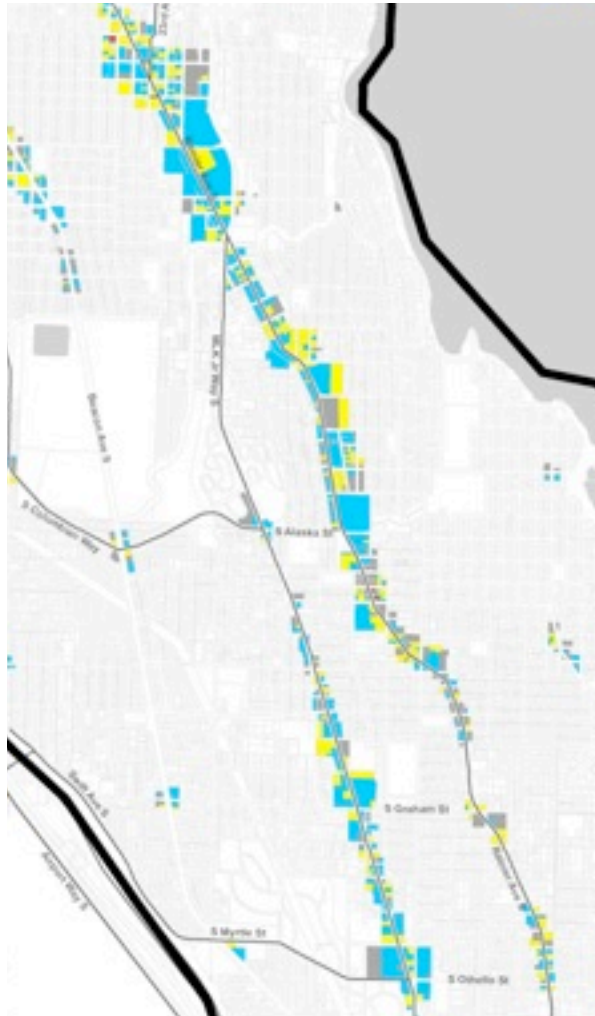
2007



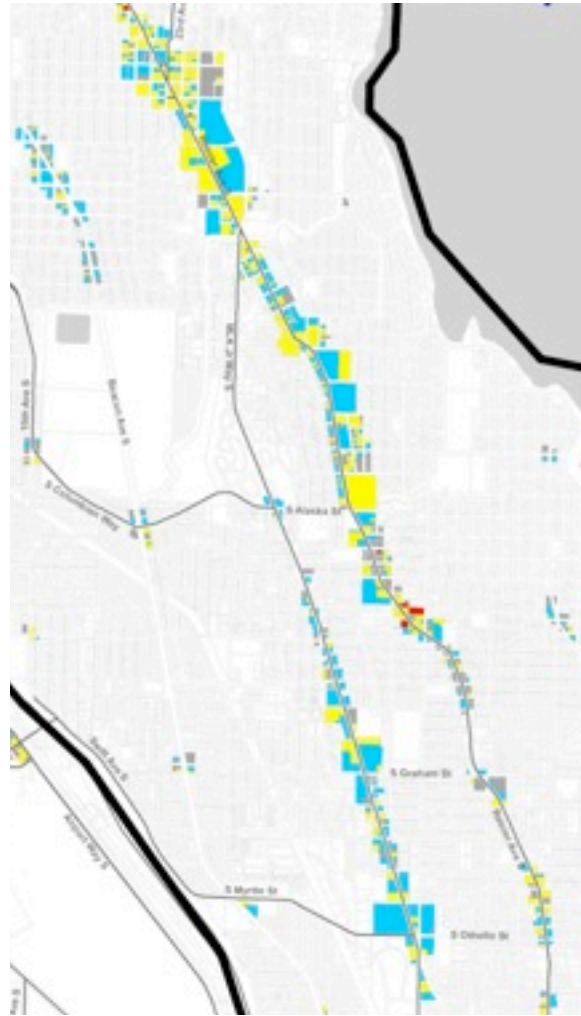
Geographic Variation - SE

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1997

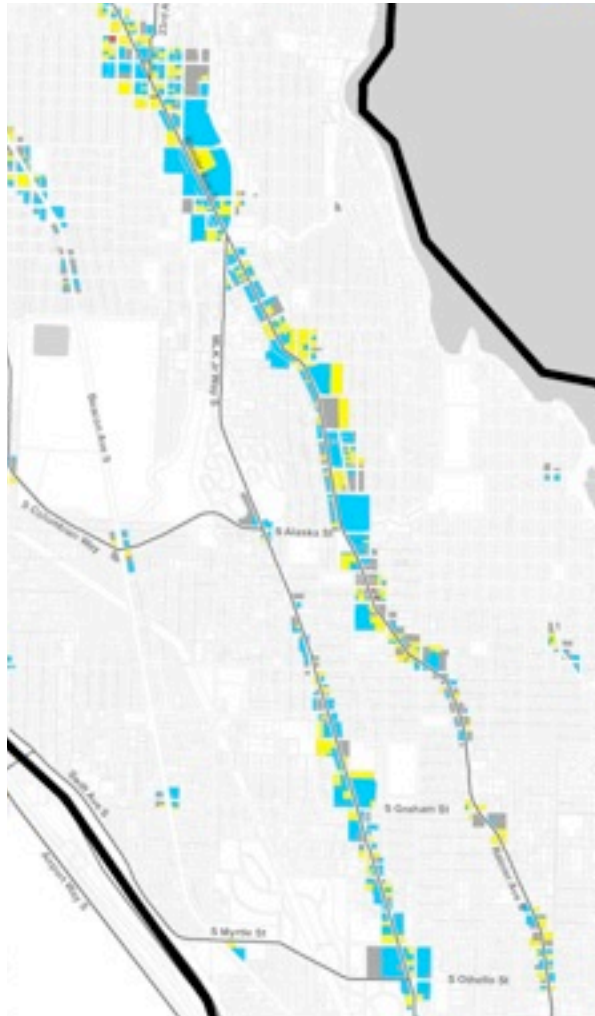


2002

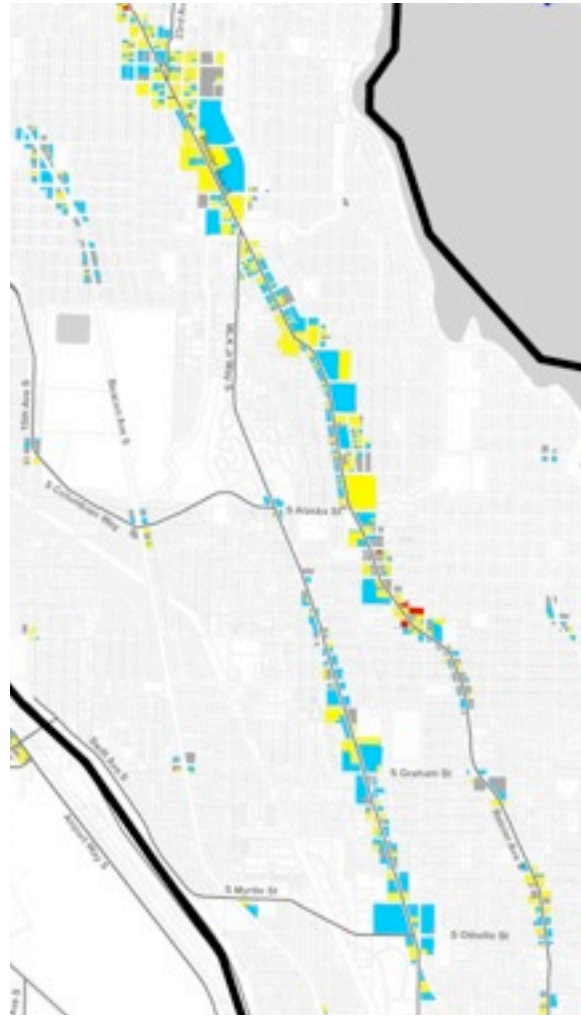


Geographic Variation - SE

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Growth through Redevelopment in Suburban and Smaller Cities

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- Accommodating population and jobs: New GMA growth targets and Vision 2040

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- Infill and redevelopment key
 - 2/3 of King Co. housing capacity on redevelopable land
 - 3/5 of King Co. employment capacity on redevelopable land
 - Suburbs: focus on “retrofitting” downtowns, shopping centers, major institutions/facilities districts
 - Goal: Compact mixed-use urban centers

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 - Suburbs: focus on “retrofitting” downtowns, shopping centers, major institutions/facilities districts
 - Goal: Compact mixed-use urban centers
- Challenges to estimating redevelopment potential
 - Emerging markets with little activity
 - Reliance on recent trends can be misleading
 - Small cities, small data samples

King Co. Buildable Lands Methodology

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 - Future densities (dus/ac, FAR, floor area/empl)
 - Mix of uses in mixed-use zones
- Critique of current methodology
 - ILR is too conservative and unreliable
 - Mismatch between assumed densities and plans and zoning

Data on Suburban Centers



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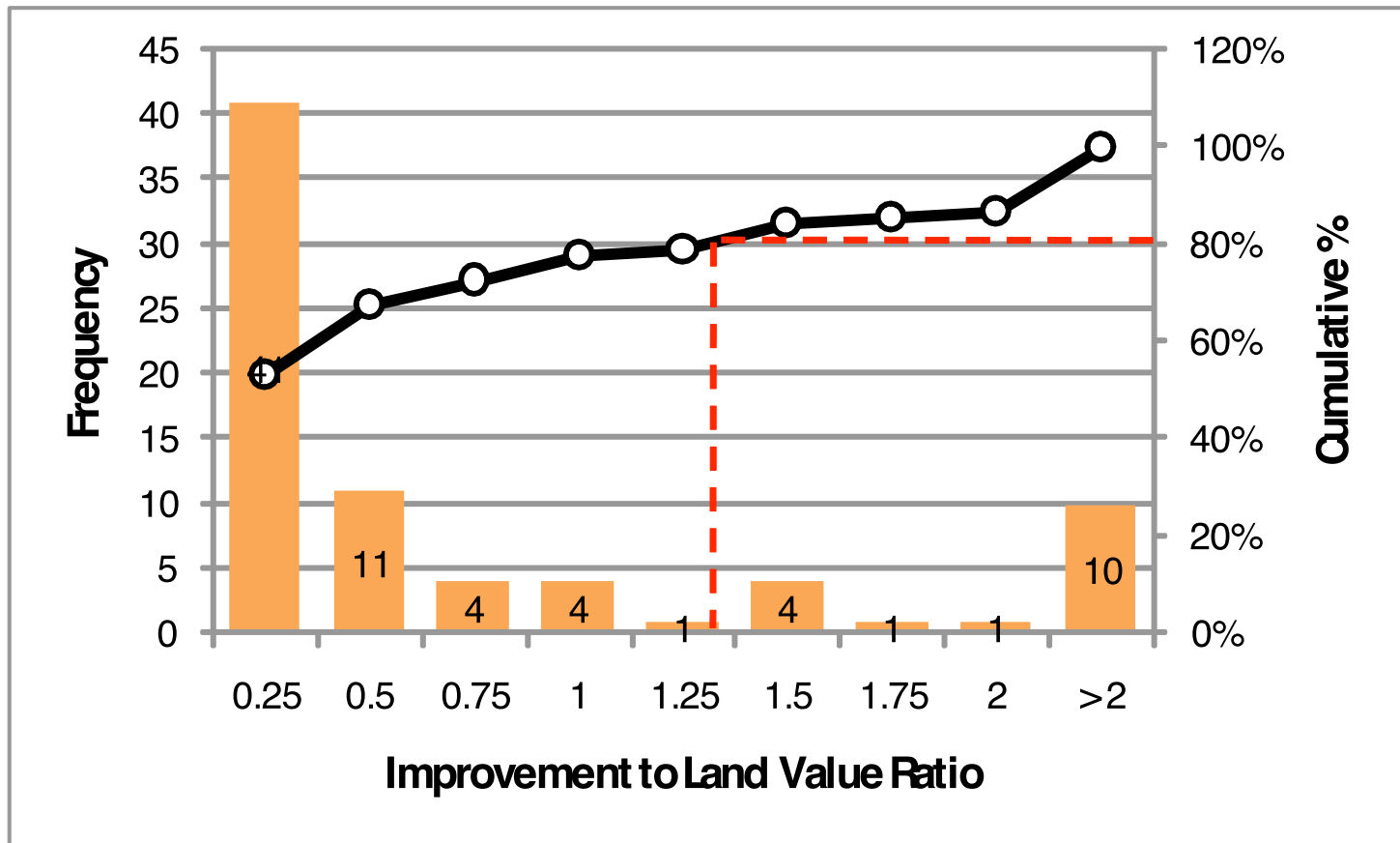
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 - Redevelopment represented bigger share over time



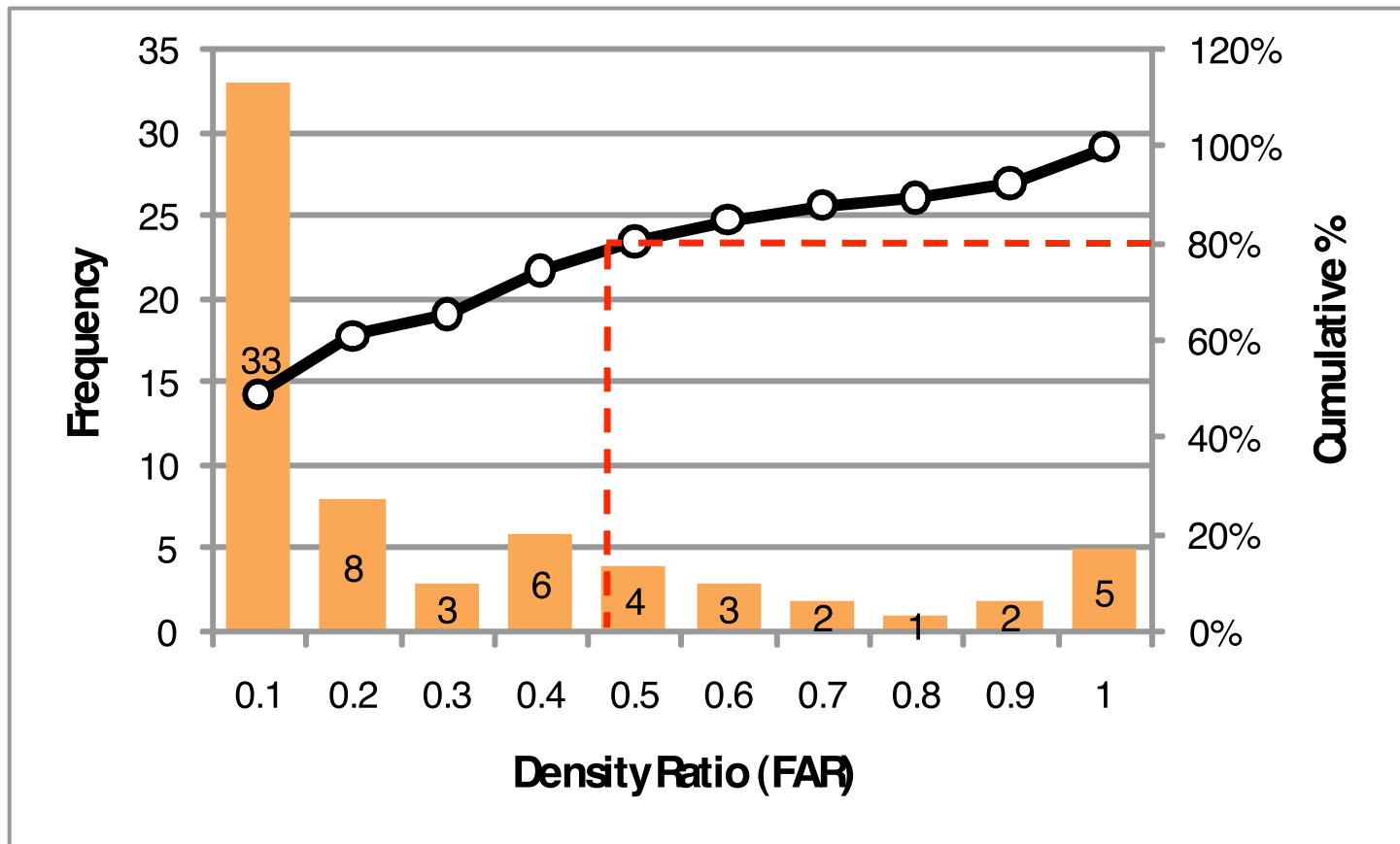
Redeveloped Properties (1997-2009)

King Co. Suburban Centers



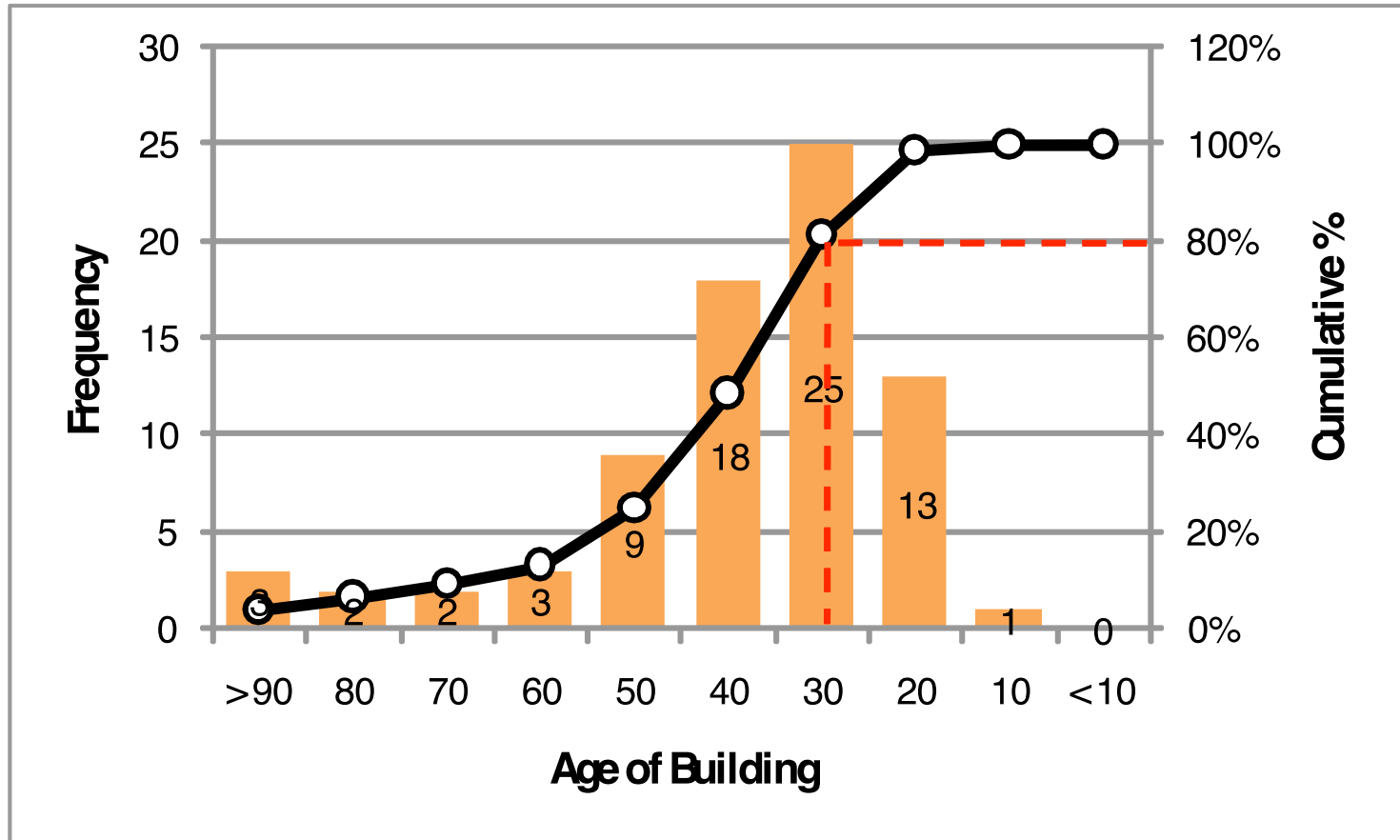
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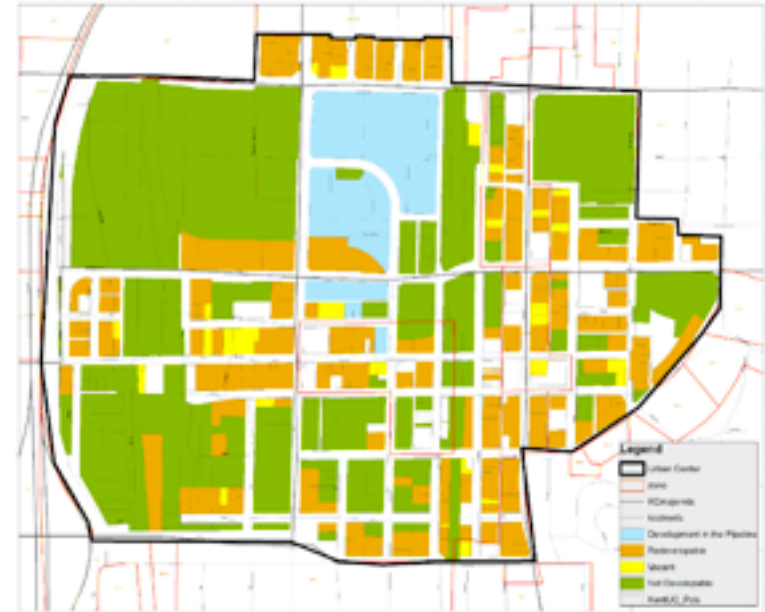
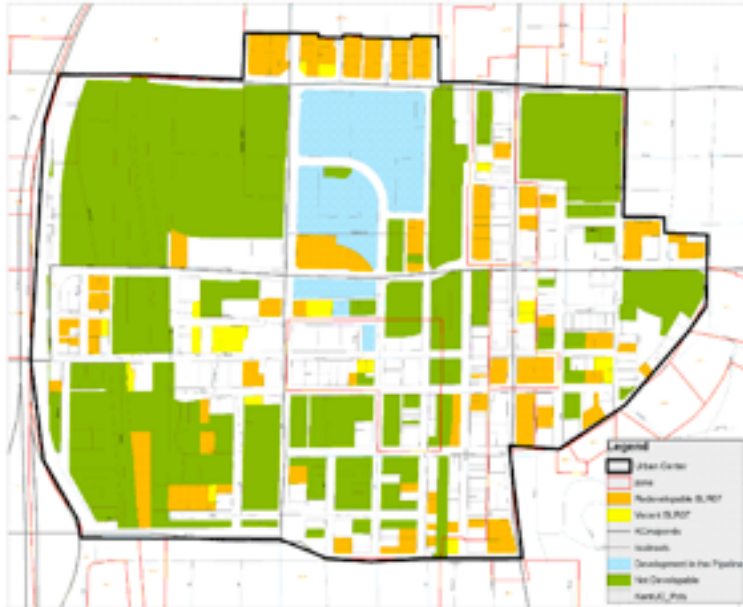
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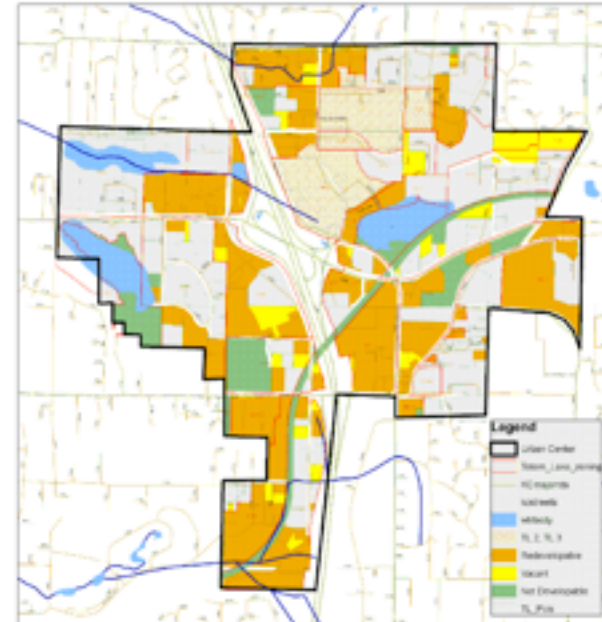
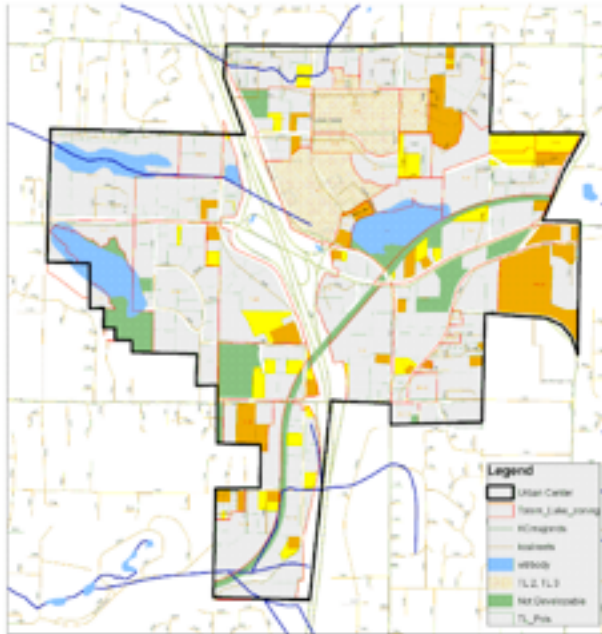
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2. Edit GIS selection using checklist for additional factors
3. Monitor development outcomes over time as basis for adjusting policy and assumptions

Sensitivity Analysis: Kent UC



	2007 BLR	Alternative Analysis
Definition of redevelopable land	Existing Use SF or Imp/Lnd < 1	Existing Use SF or Current FAR / Expected FAR < 0.33
DUs/Ac	75	90
FAR	0.15 - 1	1 - 2
MF for Redev. Land	15%	25%
Total DU Capacity	700	1900
Total Job Capacity	1400	4000

Sensitivity Analysis: Totam Lake UC



	2007 BLR	Alternative Analysis
Definition of redevelopable land	Imp/Lnd value < 0.5	Existing Use SF or Current FAR / Expected FAR < 0.33
DUs/Ac	25 -100	Same
FAR	0.3 - 2	Same
MF for Redev. Land	15%	25%
Total DU Capacity	800	3000
Total Job Capacity	8000	17000

Additional Factors

Local staff edit GIS maps using checklist tool with **definitions** and **methods** for identifying additional factors affecting redevelopment potential, to include:

Redevelopment Potential

- ☐ Current use
- ☐ Potential land assembly
- ☐ Developer or owner interest
- ☐ Single-family homes
- ☐ Building condition
- ☐ Location
- ☐ Incentives
- ☐ Market demand

Barriers to Redevelopment

- ☐ Limited access
- ☐ Property owner
- ☐ Regulatory restrictions
- ☐ Competing uses
- ☐ Obsolete structures
- ☐ Recent development
- ☐ Condominiums
- ☐ Historic structures
- ☐ Market demand

Next Steps and Final Thoughts

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- Next steps in King County:
 - Further analysis of parcel and project data
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- Consistency in approach boosts legitimacy and ability to coordinate planning countywide