RESHAPING METRO WASHINGTON

Arthur C. Nelson, Ph.D., FAICP
Presidential Professor and Director
Metropolitan Research Center
University of Utah

Urban Land Institute
May 21, 2009

Photo: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah.
America Grows

200 million in 1968
300 million in 2006
400 million in 2032
500 million in 2050

America adds 100 million people faster than any other nation except India and Pakistan – But faster than China.

*Source:* Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah.
THE BOOM TO COME

Source: From November 2006 premier issue, *Architect* magazine, based on analysis by Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah.
Squeezing Out the Excess

Source: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah.
Housing recovery, state by state

Estimated year when excess supply of homes will be substantially depleted and new construction will be needed to meet demand:

- 2009
- 2010
- 2011
- 2012 or later

Source: Arthur C. Nelson, director of metropolitan research, University of Utah

By Julie Snider, USA TODAY
Metro DC Recovery Underway

Source: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah; data from US Census and adapted from Woods & Poole Economics.
## Getting Ahead of the Curve

<table>
<thead>
<tr>
<th>US</th>
<th>2005</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>296 million</td>
<td>433 million</td>
</tr>
<tr>
<td>Housing Units</td>
<td>122 million</td>
<td>179 million</td>
</tr>
<tr>
<td>Jobs</td>
<td>156 million</td>
<td>272 million</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Metro DC</th>
<th>2005</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>5.3 million</td>
<td>8.2 million</td>
</tr>
<tr>
<td>Housing Units</td>
<td>2.2 million</td>
<td>3.4 million</td>
</tr>
<tr>
<td>Jobs</td>
<td>3.7 million</td>
<td>6.2 million</td>
</tr>
</tbody>
</table>

*Source: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah; data from US Census and adapted from Woods & Poole Economics.*
# Residential Development

## US

<table>
<thead>
<tr>
<th></th>
<th>2000 to 2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth-Related Units</td>
<td>65 million</td>
</tr>
<tr>
<td>Replaced Units</td>
<td>38 million</td>
</tr>
<tr>
<td>Total Units</td>
<td>93 million</td>
</tr>
</tbody>
</table>

## Metro DC

<table>
<thead>
<tr>
<th></th>
<th>2000 to 2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth-Related Units</td>
<td>1.2 million</td>
</tr>
<tr>
<td>Replaced Units</td>
<td>0.7 million</td>
</tr>
<tr>
<td>Total Units</td>
<td>1.9 million</td>
</tr>
</tbody>
</table>

*Source: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah.*
# Nonresidential Development

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Metro DC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000 to 2040</td>
<td>2000 to 2040</td>
</tr>
<tr>
<td>Growth-Related Square Feet</td>
<td>35 billion</td>
<td>1.2 billion</td>
</tr>
<tr>
<td>Replaced Square Feet</td>
<td>102 billion</td>
<td>3.8 billion</td>
</tr>
<tr>
<td>Total Square Feet</td>
<td>137 billion</td>
<td>5.0 billion</td>
</tr>
</tbody>
</table>

**Source:** Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah.
Life-Span of Building Function

Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah, based on DoE Commercial Buildings Energy Consumption Survey.
### Bottom Line Construction
#### 2005-2040

<table>
<thead>
<tr>
<th>Type</th>
<th>US</th>
<th>Metro DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>$34 Trillion</td>
<td>$650 Billion</td>
</tr>
<tr>
<td>Nonresidential</td>
<td>$14 Trillion</td>
<td>$750 Billion</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>$ 9 Trillion</td>
<td>$300 Billion</td>
</tr>
<tr>
<td>Total</td>
<td>$57 Trillion</td>
<td>$ 1.7 Trillion</td>
</tr>
</tbody>
</table>

*Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah.*
How Does It Grow?
Market Analysts Finding Changing Preferences

National Association of Realtors
National Association of Home Builders
Nationally Recognized Market Analysts
Urban Land Institute
Lend Lease/PriceWaterhouseCoopers
Joint Center for Housing Policy at Harvard

Golfing Buddies and Taxi Drivers
## Households are Changing

<table>
<thead>
<tr>
<th>Household Type</th>
<th>1960</th>
<th>2000</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HH with Children</td>
<td>48%</td>
<td>33%</td>
<td>26%</td>
</tr>
<tr>
<td>HH without Children</td>
<td>52%</td>
<td>67%</td>
<td>74%</td>
</tr>
<tr>
<td><em>Single/Other HH</em></td>
<td>13%</td>
<td>29%</td>
<td>34%</td>
</tr>
</tbody>
</table>

*Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah.*
People Turning 65 Each Year

[Figures in 000s]

What Futurists Tell Us

Bio-medical advances extend lifetimes.
Insurance actuarial tables extend to 120.
Another 20 years added – minimum.
Adulthood mostly after child-rearing.
# Share of Growth 2000-2040

<table>
<thead>
<tr>
<th>US HH Type</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>With children</td>
<td>14%</td>
</tr>
<tr>
<td>Without children</td>
<td>86%</td>
</tr>
<tr>
<td>Single/Other</td>
<td>30%</td>
</tr>
</tbody>
</table>

*Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah.*
“New Urbanity” Preferences

New Housing Market Realities

- Sub-prime mortgages are history
- Alt-A mortgages problematic
- FHA-like conventional mortgages king
- “Jumbo” loans heightened underwriting
- Demand for $1 million+ homes in 30 largest markets has tanked → from ~15% to <5%

**Meaning**
- Smaller homes
- Smaller lots
- More renters
Home Ownership Demand Shift

Metro DC ownership 2007 = 68%

Metro DC tenure after 2015

- 65% owner
- 35% renter

Could be

Could be

Metro DC new construction to 2015:

- 70% renter-occupied
- 30% owner-occupied

Could be

Could be

Metro DC new construction to 2020:

- 50% renter-occupied
- 50% owner-occupied

Could be

Could be

Source: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah.
Housing Mix for Life Stages

- **40% for traditional families**
  - Mostly detached on 1/6-1/4 acre lot moderate- to large-home (>2,500 sq.ft.)

- **25% for young and low-/moderate-income families**
  - Apartment (garden), townhouse, small lot detached small-size home; some “over-the-store units” (<1,200 sq.ft.)

- **25% for transition, empty-nester, higher-density choice families**
  - Condominium, upscale townhouse, small-lot moderate-size home (1,200-2,500 sq.ft.)

- **10% of housing in Accessory Dwelling Units**
  - Allowed in larger detached and attached homes
  - *Untapped resource for humane housing options*
The New Promised Land?

Photo: Atlanta Regional Commission.
Tear Up a Parking Lot, Rebuild Paradise

Large, flat and well drained
Single, profit-motivated ownership
Major infrastructure in place
4+ lane highway frontage → "transit-ready"
Committed to commercial/mixed use
Can turn NIMBYs into YIMBYs

Slide title phrase adapted from Joni Mitchell, *Big Yellow Taxi*, refrain: “Pave over paradise, put up a parking lot.”
Photo: City-County of Athens-Clarke County, Georgia
Source: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah.
Photo: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah.
Boulevard Revival

- Roughly 200 miles of Boulevard prospects
- Roughly 60,000 acres currently @<0.25 FAR
- Nearly all land ripe for revival by 2040

Revival parameters
- 33% to transit/auto/ped/bike/seg Boulevards @1.5 FAR
  - 30 units per acre \(\rightarrow 600k \text{ units} \rightarrow \frac{1}{2} \text{ demand}\)
  - 60 employees per acre \(\rightarrow 1.2M \text{ jobs} \rightarrow \frac{2}{3} \text{ demand}\)

- 0% change in developed land
- \(\sim 50\%+\) reduction in VMT
Metro 2030
Expansion proposals presented to WMATA board
April 24, 2008
plus Metrorail and light rail/streetcar expansions already proposed

Greater Greater Washington
http://greatergreaterwashington.org/
Map by David Alpert • alpert@ggwash.org
Transit Oriented Development Template
10-minute walk or about 1500-2000 feet
*The speed of a saunter or a walk-in-the-park.*

### District Boundary Definitions in TOD Ordinances

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Distance of District Boundary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seattle, WA</td>
<td>¼-mile radius from LRT station</td>
</tr>
<tr>
<td>Hillsboro, OR</td>
<td>1,300-ft radius from LRT station</td>
</tr>
<tr>
<td>Portland, OR</td>
<td>¼-mile radius from LRT station</td>
</tr>
<tr>
<td>Washington County, OR</td>
<td>½-mile radius from LRT station; ¼ mile radius from primary bus routes</td>
</tr>
<tr>
<td>San Diego, CA</td>
<td>2,000-ft radius from transit stop</td>
</tr>
</tbody>
</table>

*Source: Community Design + Architecture (2001)*

*Source: Calthorpe (1993)*
Rethink TOD Planning Areas

10-minute business walk = 1km

1km radius = 6 times the planning area of ¼ mile radius →

800ac v. 125ac

1-km Suburban Station Areas

- 40 target suburban stations, 2040
- 800 acre planning areas @ 1km radius
- 30,000 acres
- 50% developed into true TODs
- 3.0 FAR target average intensity
- 60 units/acre (maximum wood-frame density)
  - 900k units = 75% of growth needs
- 120 jobs/acre
  - 1.8M jobs = 100% of new job demand

Source: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah.
READY, SET, ACTION ..........

- Demographic, preference, and other drivers changing hearts and minds.
- Boulevards/Corridors + Suburban TODs can meet all future growth needs.
- 2/3rds+ of all nonresidential space coming down 2010-2040.
- Half+ of suburbs are eroding in value
  - Lucy & Phillips: *Tomorrow’s Cities; Tomorrow’s Suburbs* (APA 2006).
- Suburbs hold the key to renewal and sustainability.
Emerging Suburban Urbanity
THANK YOU

*Photo: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah.*