

Dollars & Sense of Sustainable Development

Ed McMahon



ULI'S MISSION

The mission of the Urban Land Institute is to provide leadership in the responsible use of land and in creating and sustaining thriving communities world wide

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Source: United Nations, Bruntland
Commission Report



“Conservation is a state of harmony
between man and nature.”

-Aldo Leopold

Why Sustainability ?



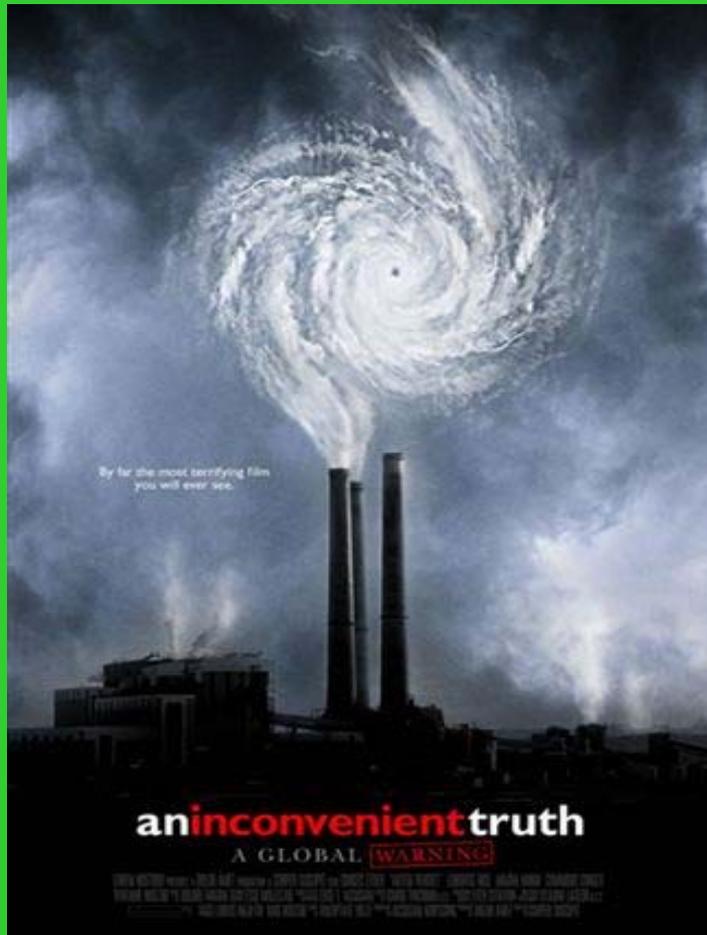
- Climate Change
- Energy Costs
- Infrastructure Deficit
- Unsustainable Land use
- Population Growth
- Makes Business Sense

Global Warming



- “Global Warming is unequivocal, and human activity is the main driver, very likely causing most of the rise in temperatures since 1950”
- Intergovernmental Panel on Climate Change – Feb. 2007

Moral Imperative?



Positive proof of global warming.



**18th
Century**

1900

1950

1970

1980

1990

2006

Regulatory Imperative?



- 37 states representing 70% of US population are developing climate action plans.
- 13 states have set carbon reduction targets.
- 850 US Mayors, representing 90 million people have adopted the Kyoto Protocol.
- Both Presidential candidates have endorsed legislation to cap & trade carbon emissions
- Sources: Newsweek, April 23, 2007: US Conference of Mayors,

High Energy Prices

WATCH "RETURN TO TITANIC," NATIONAL GEOGRAPHIC CHANNEL, JUNE 7, 9 P.M. ET/PT

NATIONALGEOGRAPHIC.COM/MAGAZINE

JUNE 2004

NATIONAL GEOGRAPHIC

**THE END OF
CHEAP**

Oil

The Shiites of Iraq 2
Under Monterey Bay 36
Cliff-Hanging Tombs 56
Sprawl on the Mall? 60
At Home With Flickers 72
ZipUSA: Pawtucket, RI 110
BONUS Tear-out Map of Washington, D.C.

Unsustainable Land Use



Large Lot Subdivisions



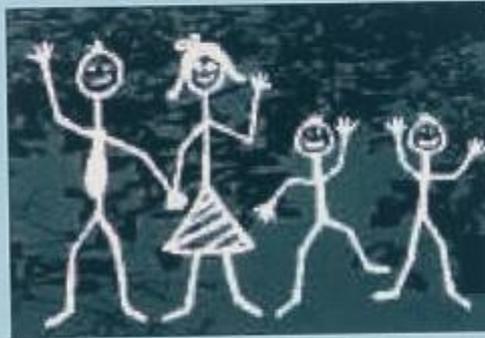
Strip Commercial

Taking up more space: Household vs. Lot Size

Lot Size



Household Size



Even though the number of people per household has decreased from 3.57 to 2.72 over the last 50 years, the amount of land that each individual home consumes has increased by almost 60 percent.

Open Space Conversion

U.S. Regions	Change in Population	Change in Urbanized Land
Midwest	7.06%	32.23%
Northeast	6.91%	39.10%
South	22.23%	69.61%
West	32.21%	48.98%
United States	17.02%	47.14%

Population Growth Versus Land Development 1982-1997
(Source: The Brookings Institute, July 2001)

Growth Trends Reinforce Driving



Infrastructure Deficit



- US needs \$220 billion per year for needed repairs to roads, bridges & other infrastructure
- Fed. state & local government spend less than half this amount
- Federal gas tax hasn't been raised since 1993
- Costs for asphalt, steel & concrete have gone up 50 % in last 3 years
- We're falling behind our global competitors

I-35 Bridge Collapse Minneapolis

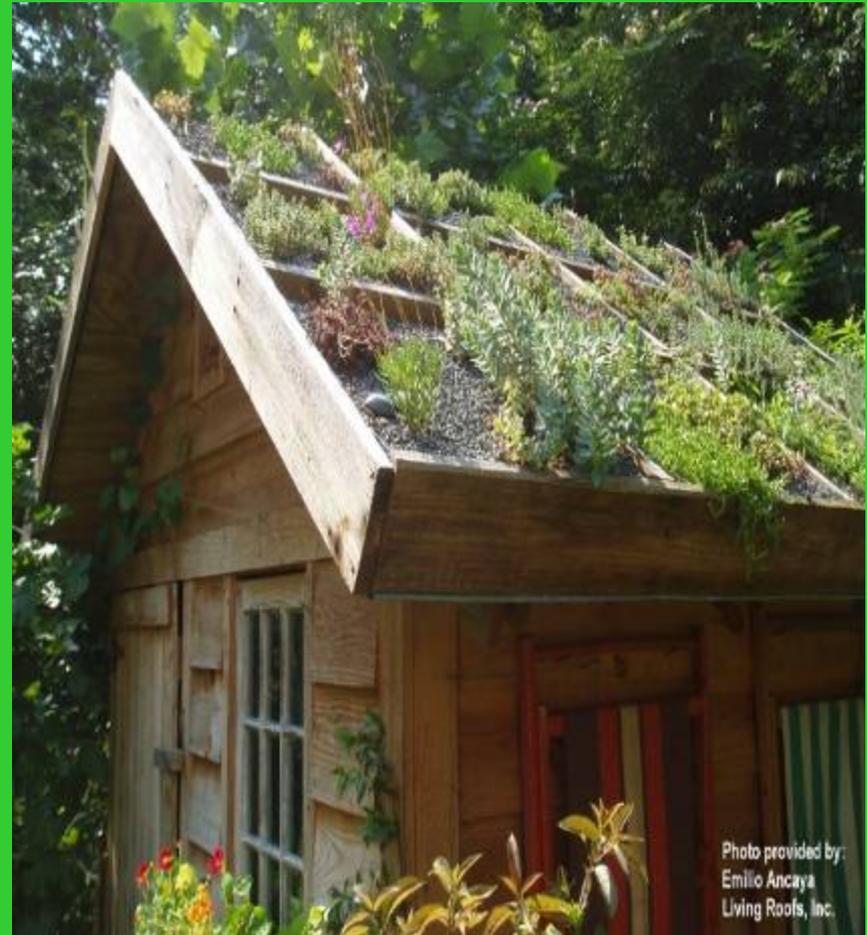
Population Growth



- 60 Million New Residents by 2030
- 24 Million New Housing units
- 1.1 Million Units per year
- Demographic shifts and Immigration
- Decline of Traditional Households

Green Development: The Perception

- Tree Huggers
- No Growthers
- Nimby's
- Eco-People
- BANANAS
- CAVES



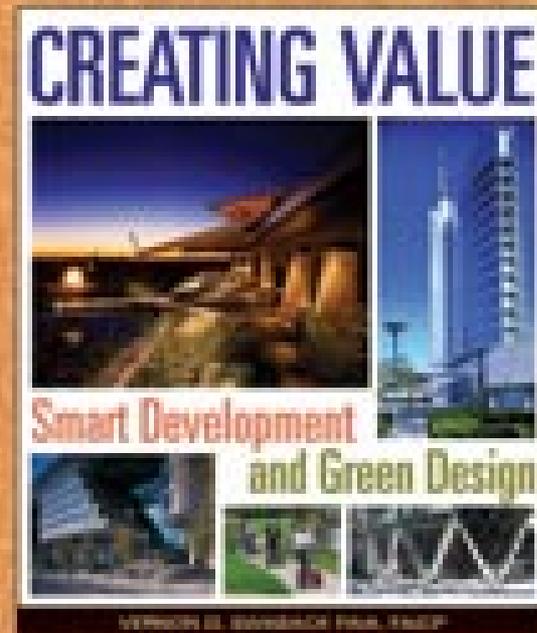
New Paradigm

- You can have Quality and Environmental Integrity
- Profit and Principles
- Greater product differentiation & appeal
- Lower long term operating costs
- Green is superior for you and your family

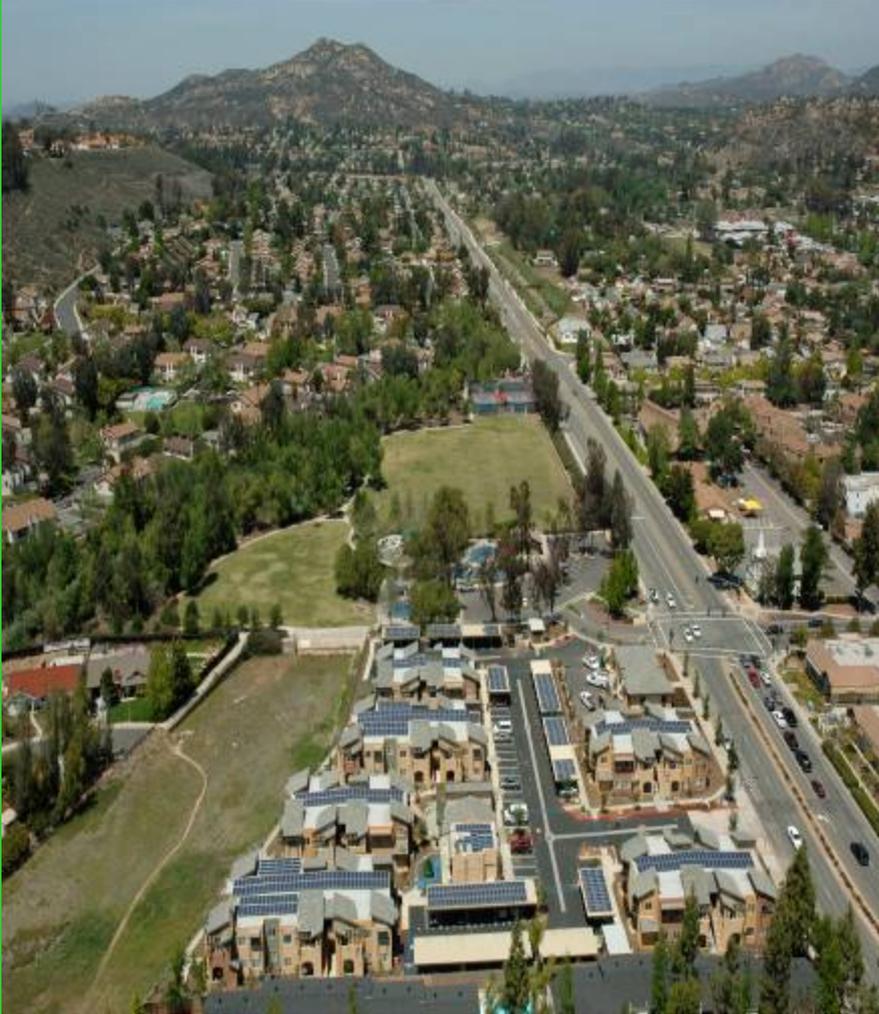


Sustainability Goals

- Healthy Environment
- Vigorous Economy
- Vibrant Community



Solara Community Housing



- 56 unit affordable apt.
- Infill site
- 1st apt fully powered by PV
- Energy usage reduced by 95%
- Reduced parking due to proximity to shopping & services





NOVEMBER • DECEMBER 1997

STUDY CONCLUDES

Narrow streets are the safest

Twenty-four foot wide streets are the safest, according to a study by Swift and Associates and the City of Longmont, Colorado. The study, *Residential Street Typology and Injury Accident Frequency*, looked at 20,000 automobile accident reports over an eight year period in Longmont, and examined fire department records. This data was correlated by street and 13 variables.

"The most significant causal relationships to injury and accident were found to be street width and street curvature," according to the report. "The analysis illustrates that as street width widens, accidents per mile per year increases exponentially, and that the safest residential street width is

CONTINUED ON PAGE 9





The Value of Trees

- “Studies show that developed lots with trees sell for an average of 15 -20 percent more than similarly sized lots without trees.”
- Tree planting and preservation pays off not only on upscale properties, but on smaller, inexpensive lots as well.
- Trees also help to clean the air, provide a home for wildlife, slow stormwater runoff and reduce the urban heat island effect.”
- Source: *Building Greener Neighborhoods, Trees as Part of the Plan, NAHB*

HILTON HEAD AUTO PARTS

PITTSBURGH PAINTS

TRUE VALUE HARDWARE





DOLLAR GENERAL STORES

TV

piggly wiggly

7-Eleven

COREY

Value of Trees and Landscaping

- Increase financial return of 5 to 15%
- Increase rate of project absorption
- Increase productivity, morale and job satisfaction
- Help developers win support for proposals
- Source: ULI, *Value by Design*

Keys to Sustainability

1. Green Buildings
2. Mix Uses
3. Housing Choices & Affordability
4. Walkability
5. Transportation Choices
6. Open Space & Green Infrastructure
7. Reuse, Recycle, Regenerate
8. Community Character
9. Water Resources
10. Education, Incentives & Collaboration



Green Building

- Energy Efficiency
- Water Conservation and Reuse
- Indoor Air Quality
- Materials
- Site Planning and Waste Management



LEED Projects
total 5,000 in
2006

LEED Projects 2008

1283

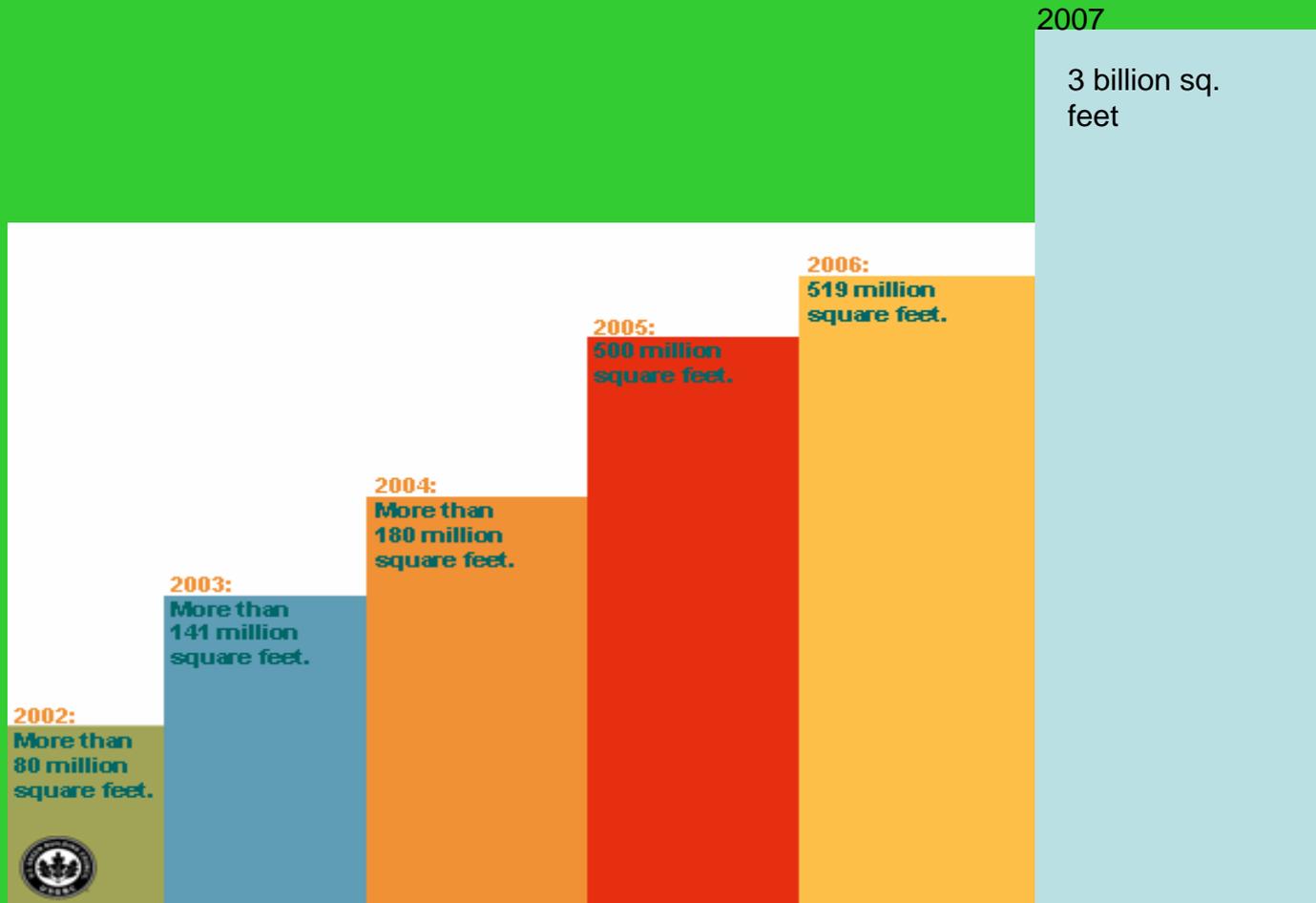
LEED Certified
Projects

9,000+

LEED Registered Projects



LEED Registered Projects



Ford Motor Company

Dearborn, MI



Hearst Building – New York



1st LEED Certified McDonald's, Savannah, Georgia



Once Skeptics, Builders See Green in 'Green'

Continued From Page B1

tion's toughest—by 30%.

The state says it will recoup the money through energy savings estimated at about \$400,000 annually. Still, at that rate, it could take about 50 years to pay back the initial \$20 million investment represented by the premium.

Ultimately, two construction firms won bids for the complex to be used by the Department of Health Services and Department of Education. Clark/Gruen Design Build Inc., managed by Clark Construction Group Inc. of Bethesda, Md., and Hensel Phelps Construction Co. of Greeley, Colo.

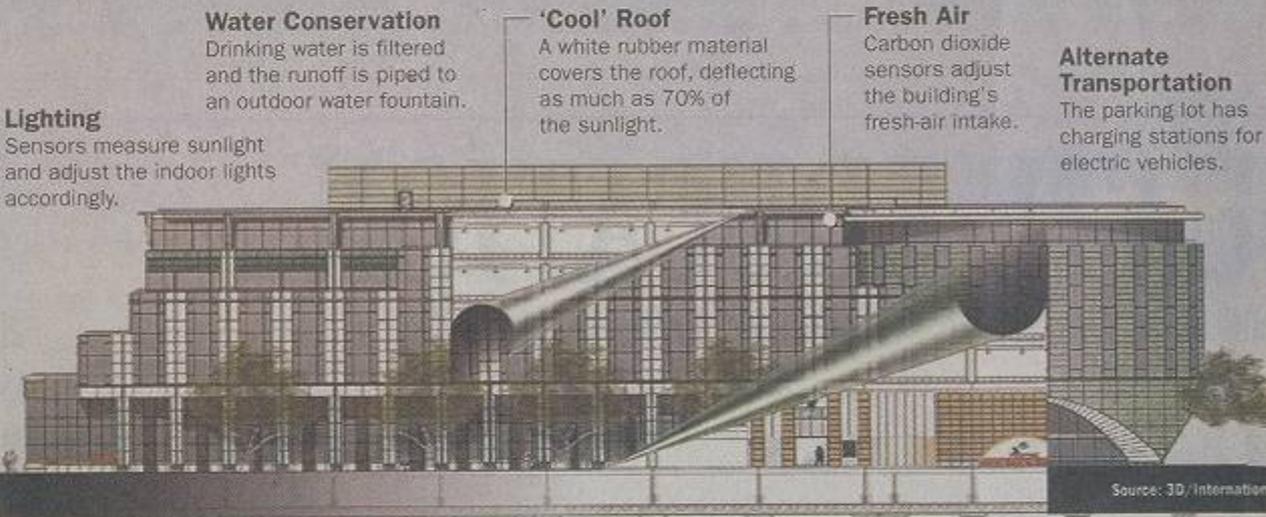
Jon W. Ball, district manager at Hensel Phelps, says his first step was to bring Anthony Bernheim, a nationally recognized green designer, onto the bidding team made up of subcontractors and Hensel Phelps employees, including Mr. Mitchell. Mr. Bernheim is a principal at the San Francisco architecture firm SMWM. The master architectural firm for the whole complex, set to be completed next year, is Johnson Fain Partners of Los Angeles.

From the start, both sides were skeptical, says Marian Keeler, a colleague of Mr. Bernheim's. After their first meeting, team members reminded Ms. Keeler to bring her green paint to the next one. Ms. Keeler shrugged it off as a bad joke but wondered if she was wasting her efforts.

For their part, the builders felt Mr. Bernheim waltzed in with a list of bells and whistles but didn't explain how they fit

California Dreaming

The state wants the East End Complex to be a model for 'green' building. Here are some enhancements.



Source: 3D/International

tion building shows both the creativity and challenges in earning a green seal of approval. Mr. Mitchell calls attention to the gray carpeting that contains 50% recycled content and is 100% recyclable. He opens doors made of recycled sawdust panels covered in a thin veneer of blond wood. About 90% of the materials used in the building contain recycled content—a far higher percentage than in most buildings.

To score points in energy efficiency,

formaldehyde from our customers," says company Market Manager Jo Anne Cambruzzi, who adds the company sees a competitive advantage with "environmentally smart" products.

In addition, makers of more than a dozen products had to undergo tests for the 21 harmful gases, many more than the industry standard of three or four, Mr. Lesnet says. All Steel spent a year and paid between \$15,000 to \$20,000 to test its

didn't pass the test, the company ripped apart and retested each part until it identified which was emitting unacceptable levels of fumes. Once the company found the culprit, which it declined to disclose, went back to the vendor and asked it to find a solution. Now, all customers ordering the same model workstation get one that meets the tougher standards of the California complex.

"The state really set a new benchmark," Mr. Lesnet says.

Does it Cost More?

Incremental cost to go LEED on 33 case studies:

Certified	0.66%
Silver	1.82%
Gold	2.11%
Platinum	6.50%
Average	1.84%

Source: Davis, Langdon & Seah, 2006

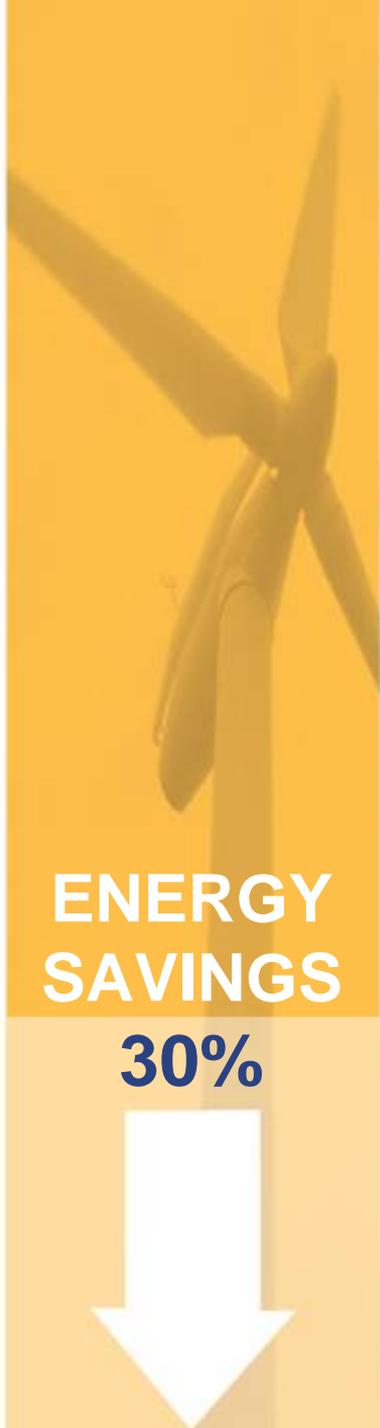
Does it Add Value?

Building owners/operators on green vs. non-green buildings:

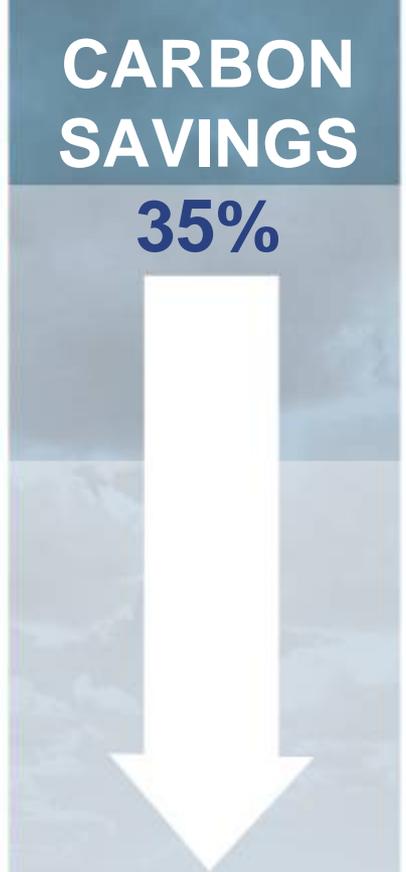
Greater occupant health/well-being	86%
Higher building value	79%
Higher worker productivity	76%
Higher ROI	63%
Higher asking rents	62%
Higher occupancy	52%
Higher retail sales	40%

Source: U.S. Green Building Council, 2006

Average Savings of Green Buildings



Average Savings of green Buildings



Source: Capital E

But, Will They Pay for It?

Builders:

Less than **50%** of the buyers will pay more for “green features.”

Only **44%** would pay **\$2,500** or more.

Buyers:

Nearly **90%** would pay more for “green features.”

Of those, **66%** would pay **\$2,500** or more.

Source: Professional Builder, 2003

**Why should
owners and
tenants care?**

**“Five years ago nobody
knew about green
building. Now all of our
major tenants want LEED
space. At Hines, we
specialize in Class A
space, and we’ve reached
the point where clients
don’t think it’s Class A
unless it’s green.”**

Jerry Lea – Hines

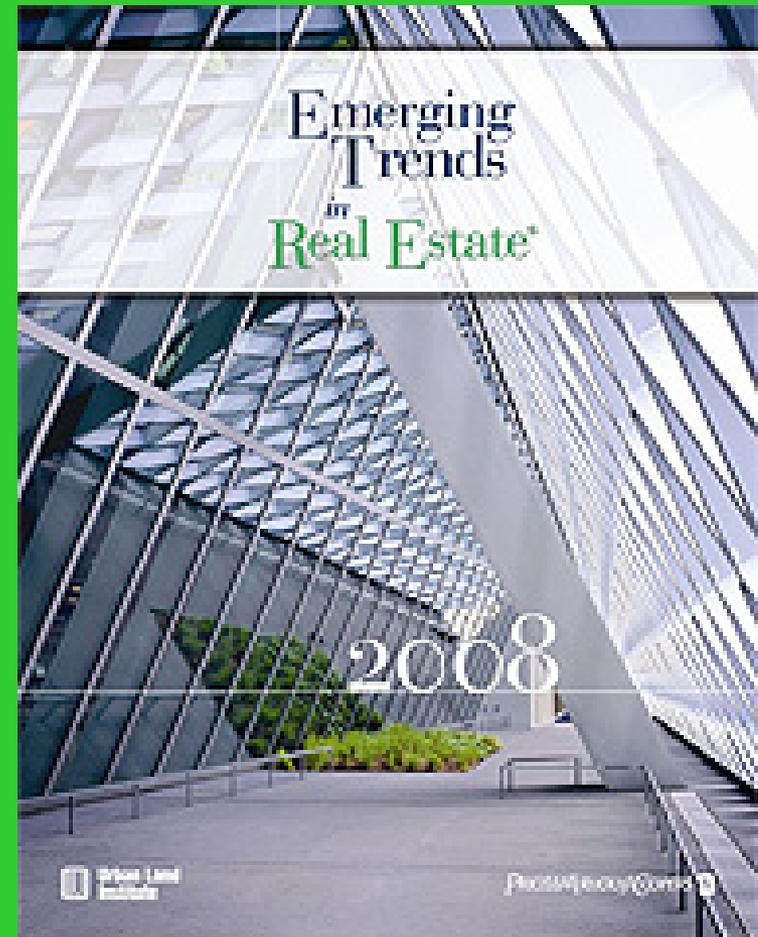


“As green goes mainstream,
standard buildings will rapidly
become obsolete and lose value”

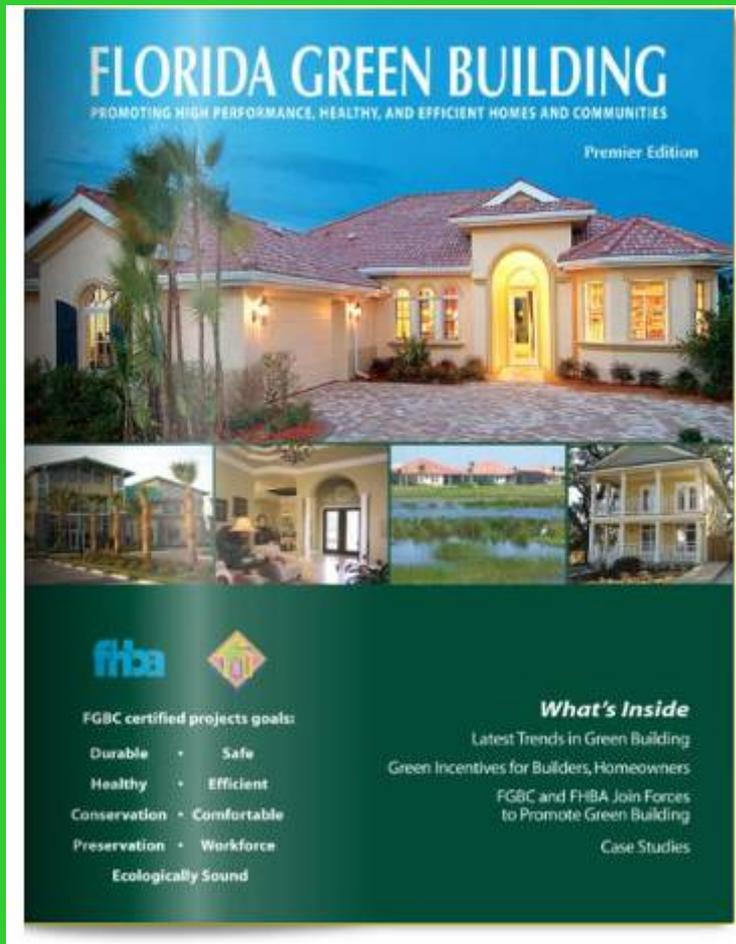
Source: Charles Lockwood,
Harvard Business Journal, June
2006

The Capital Markets?

- “Stay on top of green or eat everyone’s dust. There will be differentiation. Over the long run adapt or get crushed”
- *Emerging Trends in Real Estate, 2008*, ULI & Price Waterhouse Coopers



Green is going mainstream but it is not green to:



- Ignore existing buildings
- Build massive homes
- Encourage urban sprawl
- Ignore advantages of multi-family homes
- Pretend that location doesn't matter

“Green buildings in wrong location are not truly green. Smart growth that does not take advantage of green buildings is not smart”

Jonathan Rose



The Patterns of Development

- Where you put development
- How you arrange development
- What development looks like

1st Principle of better development is deciding where NOT to develop

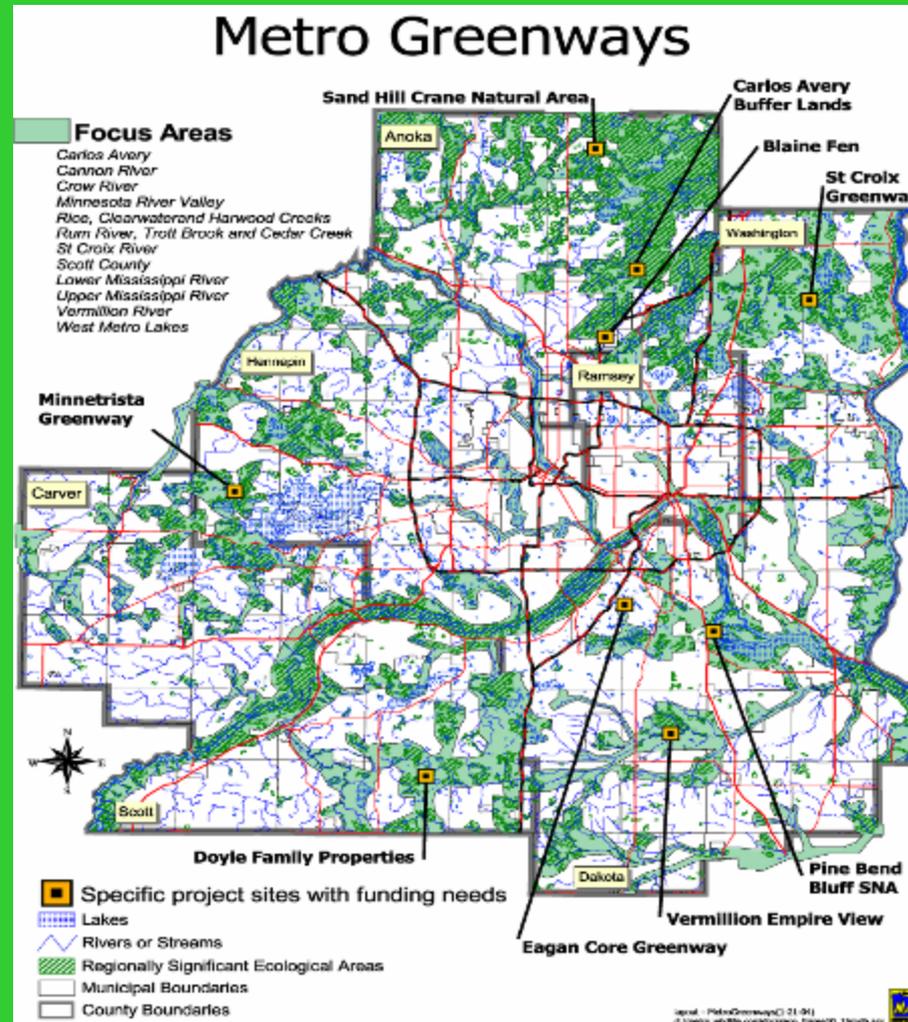


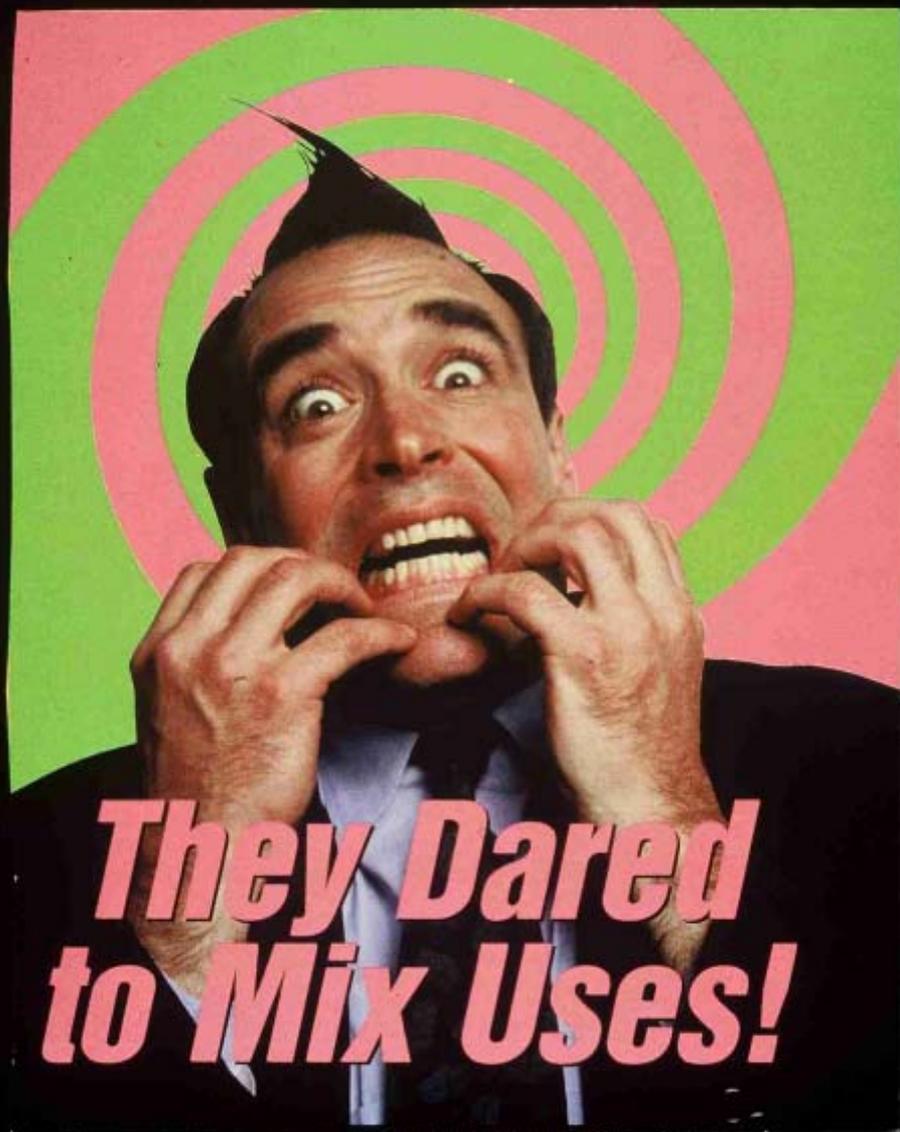


Is this the best place to put a development?



Identify and Sustain Green Infrastructure





***They Dared
to Mix Uses!***

- How we arrange development

Spread Out or Compact



Large lot subdivision



Traditional Neighborhood

Conventional Development

- Spread Out
- Single use
- Auto Oriented
- Private Yards
- Limited Product Diversity
- Euclidean Zoning
- “The Status Quo”



Sustainable Development

- Compact
- Mix of Uses
- Pedestrian-oriented
- High Quality Design
- Public Spaces
- Interconnected Streets
- Traditional towns



What's more important? The size of the lot?



Or the Character of the Neighborhood?





Houses next to golf course

Value of Open Space

- Developers build golf courses because golf courses sell real estate at premium prices
- Very expensive to design, build & maintain golf courses
- Parks and open spaces also sell real estate at premium prices at lower costs to create and maintain



Prairie Crossing 
Village Green & Gazebo

Conservation Design



- Preserves Open Space
- Reduces Infrastructure Costs
- Increases Property Values
- Protects Rural Character

Do more people want this?



Or this?



Community Amenities Sought by Homebuyers

- Walking trails/bike paths - 36%
- Parks/natural areas - 26%
- Playgrounds - 21%
- Daycare - 14%
- Soccer Fields - 9%
- Golf Course - 6%



- April 2002
National Association of Realtors

Mix Uses





TBUY

BEST BUY

SPACE
100M

Now getting
a new car is
easy. You can
get it here.



Dairy Queen

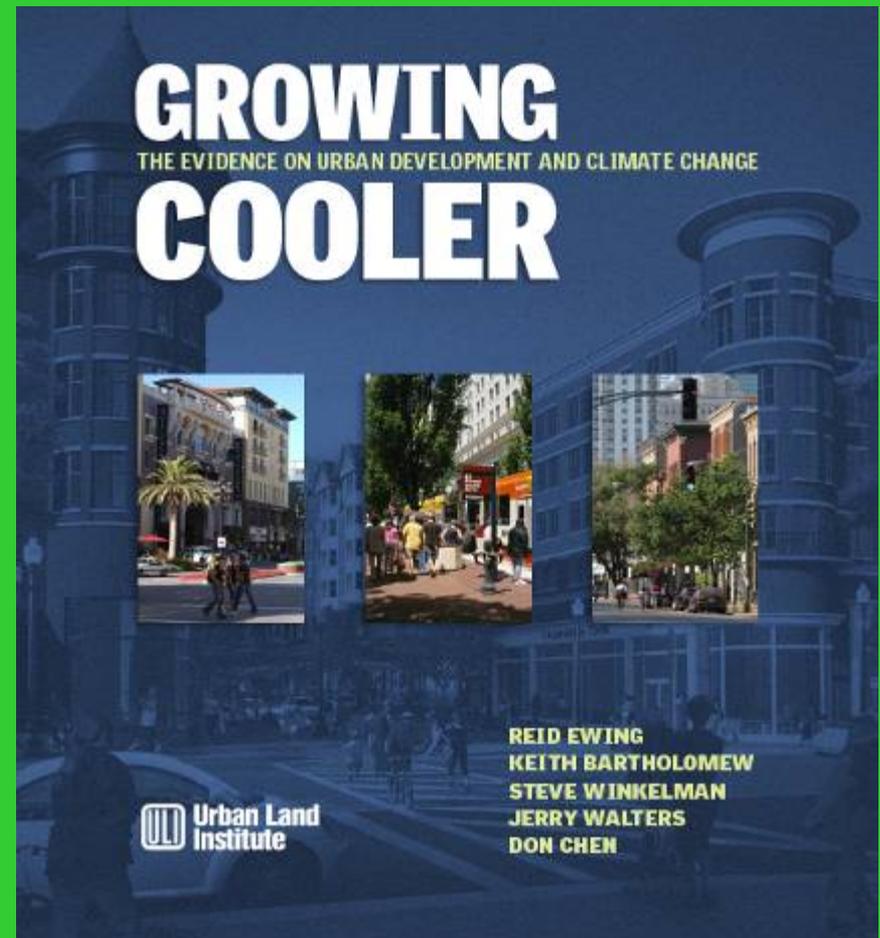
Dairy Queen

2
1/2 hr
1/2 hr

Handicap

Why Do We Need Mixed- Uses?

- We can not address CO₂ emissions without addressing VMT (i.e. driving)
- VMT has grown 3 times faster than population since 1980
- Many Americans spend more time driving than vacationing.
- US DOT predicts driving will increase 59% by 2030 if trends continue.



Here's the Good News

“People who live in walkable mixed use communities drive almost 30% less than people who live in conventional settings.”

Source: Georgia Tech and University of British Columbia, 2007

Walkable Suburbs

- Workers in Bethesda, MD walk or use transit for 73.5% of their non-commute trips (errands, lunch, shopping, etc)
- Workers in Germantown, MD (an auto oriented suburb) use the car for 90 % of their non-commute trips.
- Source: US Department of Transportation



But will Americans accept the
higher densities that come with
more compact, mixed use
Development?

Americans Don't Like 2 Things

- To much sprawl
- To much density

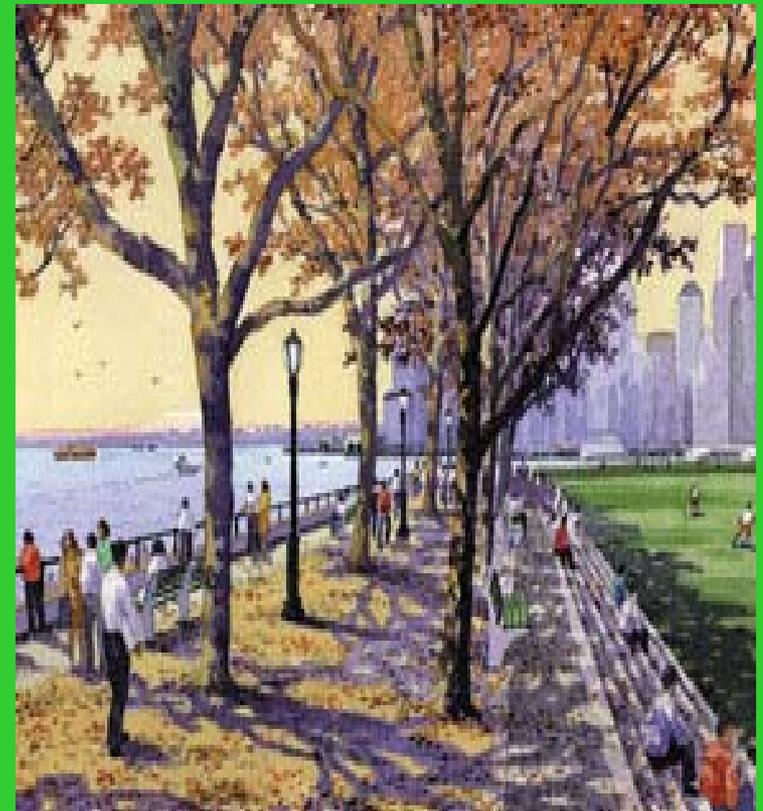


Overcoming Opposition to Density Requires

High Quality Design



Greening Communities



Density Requires Good Design & Compensating Amenity



Some of America's most attractive and valuable neighborhoods are relatively dense



Higher-Density Can Be Attractive & Valuable





Where is the most valuable land in New York State?



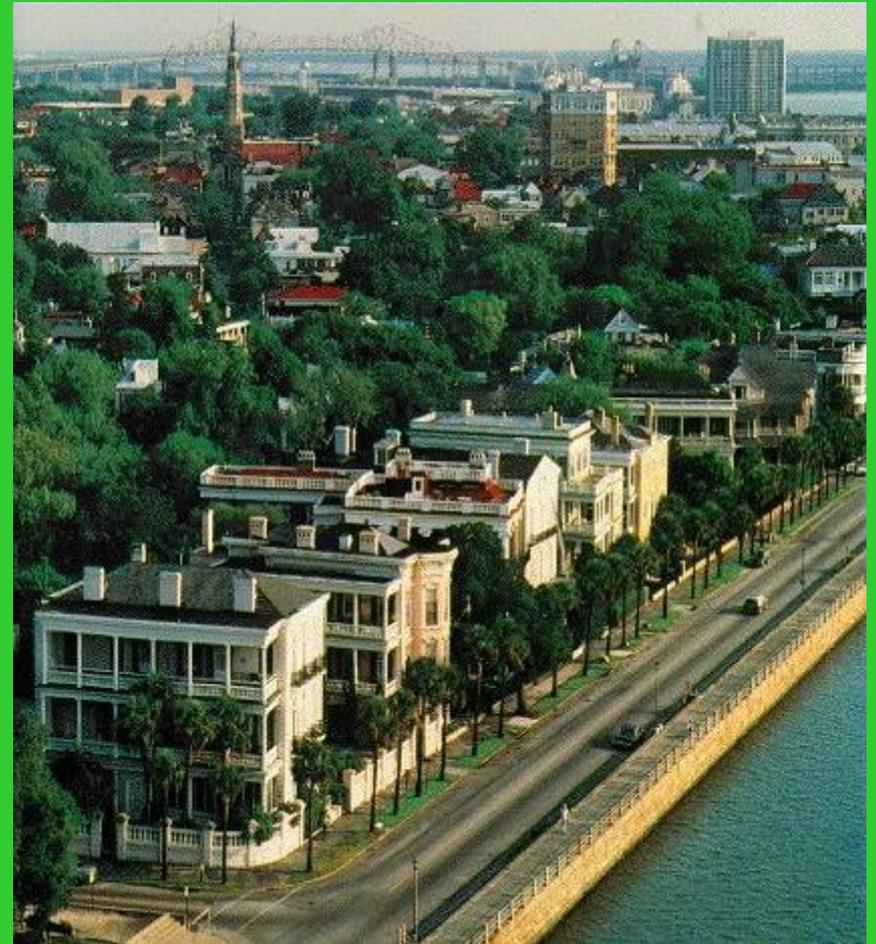
Compact Development Can Reduce Infrastructure Costs



Density Comparisons



Sun City, AZ – 5.0 units per acre

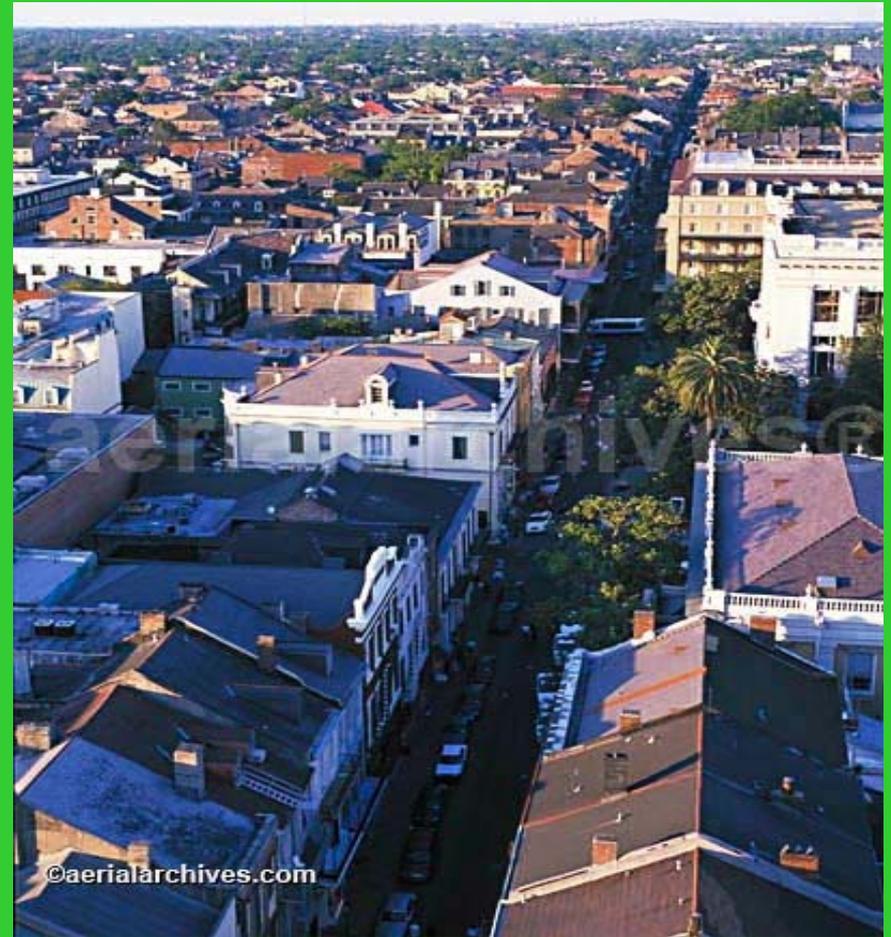


Charleston, SC – 8.3 units per acre

Density Comparisons

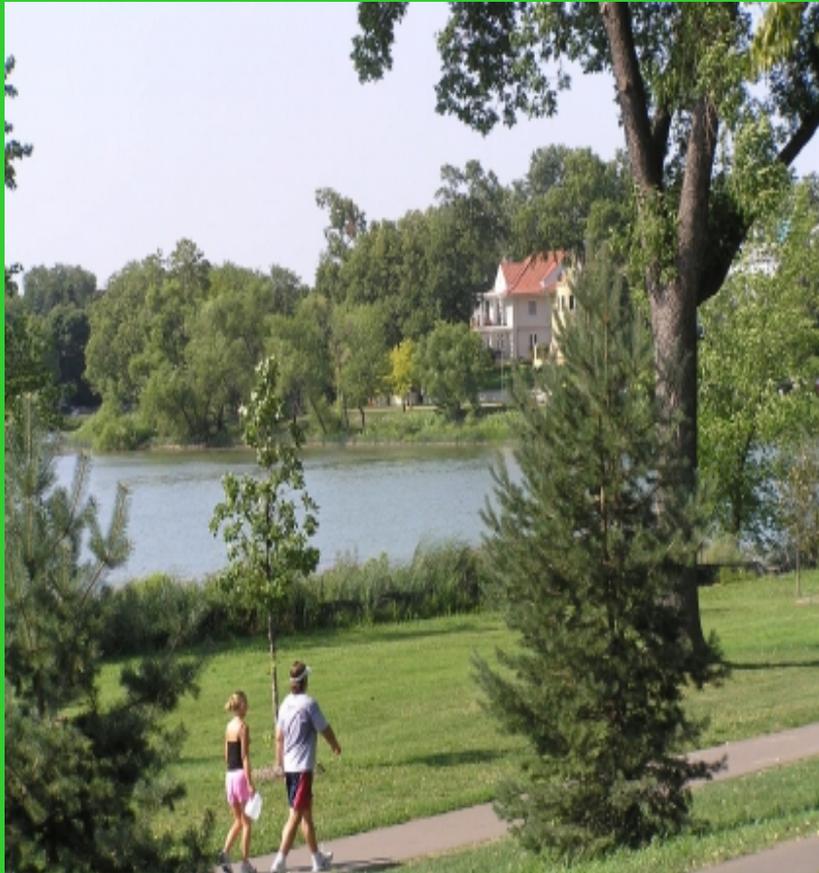


37.4 Units per acre – Las Vegas



38.9 units per acre – New Orleans

As we densify our communities we must simultaneously green our communities



Minneapolis Park System



Metro St. Louis Greenway Plan

How Do We Green A Community?

Street Trees



Green Parking Lots



Green Roofs



Greenways

How Do You Green A City?

Green Sound Walls



Community Gardens



Rain Gardens



Urban Agriculture

The Changing Market ?

The subprime crisis is just the tip of the iceberg. Fundamental changes in American life may turn today's McMansions into tomorrow's tenements.

BY CHRISTOPHER B. LEINBERGER



The Next Slum?

- Pent-up demand for urban living is evident in housing prices.
- Urban residential space goes for 40 to 200 percent more per sq. foot than traditional suburban space in cities all across US
- Walkable suburban neighborhoods command large price premiums over driveable suburbs.
- Source: Christopher Leinberger, Atlantic Monthly – March 2008

Reasons for Market Demand for Walkable Neighborhoods

- Rising costs for gasoline & transportation
- Baby boomers becoming empty nesters
- 75% of households have no school age children
- Boredom with conventional development
- Demand greatly exceeds supply
- Gen Xers like urban lifestyles (short commutes, nightlife, etc.)

Walkable Development is a Low Cost Climate Change Strategy

- Compact development can cut driving by 20 % to 40% percent.
- We already have the technology to build walkable communities.
- Pursuing compact development involves shifting investments that have to be built anyway.
- Walkable communities can save people money and improve public health.

Keys to Sustainability



What
Development
Looks Like

Community Character Matters



“If a building, landscape or city is not beautiful, it will not be loved, and if it is not loved it won’t be maintained and improved. In short, it won’t be sustained,”

Doug Kelbaugh, Dean, University of Michigan, School of Architecture



“We take stock of a city like we take stock of a man. The clothes or appearance are the externals by which we judge.”

Mark Twain



Welcome to
the City of
FRANKLIN



MIDFIELD
CITY LIMIT

Lavender's
FLOWERS
Marlboro
\$1.10

S P E E
E N

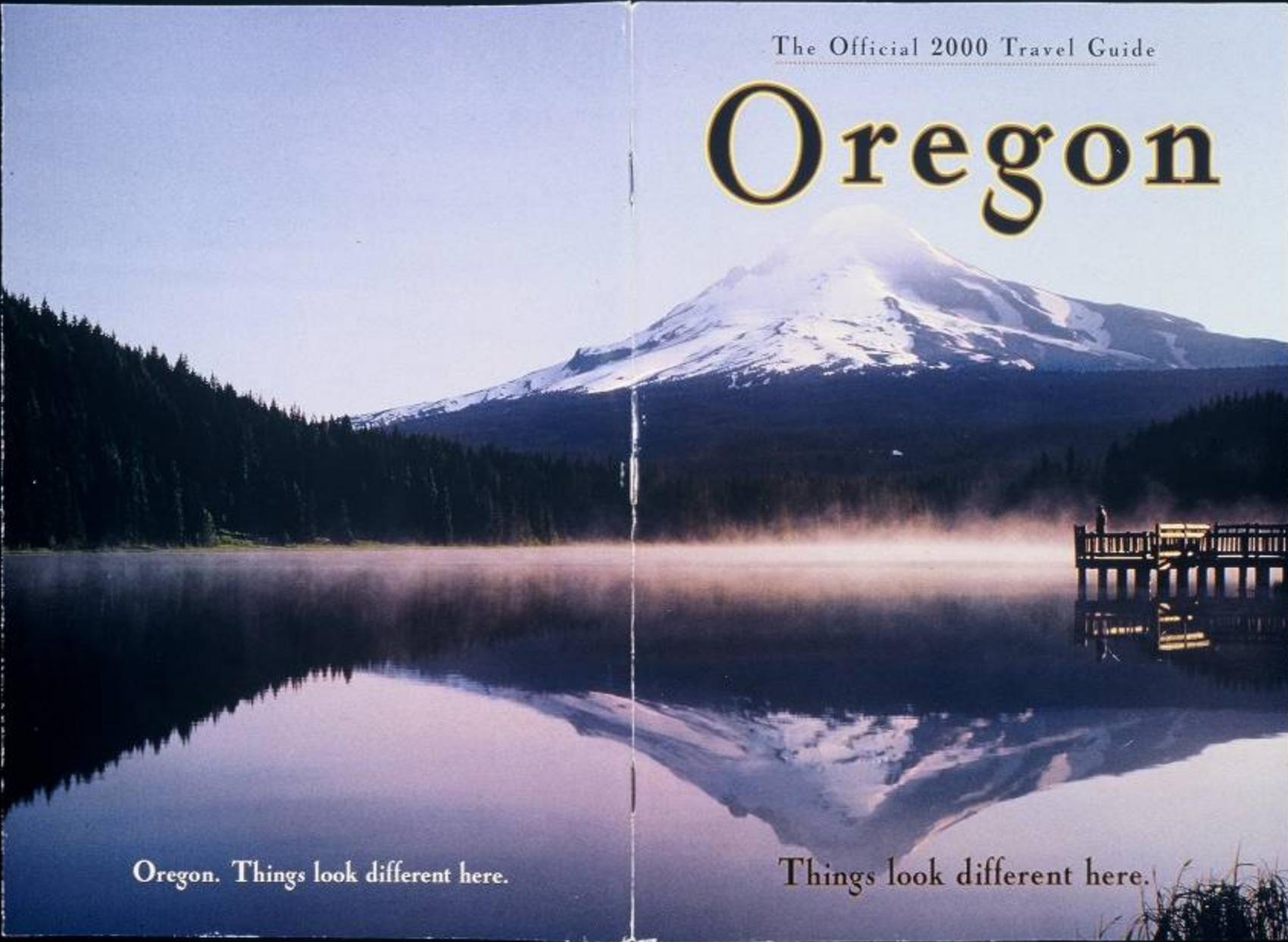
Marlboro

AND OTHER CIGARETTES
SOLD HERE

\$1.10



COMMUNITY IMAGE
IS CRITICAL
TO ECONOMIC VITALITY
AND QUALITY OF LIFE

The image is a full-page photograph of a scenic landscape. In the background, a large, snow-capped mountain rises against a clear sky. The middle ground is filled with a dense forest of evergreen trees. In the foreground, a calm lake reflects the scene, with a layer of mist or fog hovering just above the water's surface. On the right side of the lake, a wooden deck or viewing platform extends into the water. The overall atmosphere is serene and majestic.

The Official 2000 Travel Guide

Oregon

Oregon. Things look different here.

Things look different here.



VIEW PRESERVED BY
BEAUFORT COUNTY
OPEN LAND TRUST

JOINT PROJECT WITH THE
CITY OF BEAUFORT

55 10 7

SCENIC VIEW
500 FT. RIGHT

 <p>Comforts of Home QUILTS COLLECTIBLES FABRICS</p>  <p>Turn Left 6 Mi. 824-4675</p>	<p>RAY'S SHANTY (SHRIMP)</p> <p>7 Mi. On Right</p> <p>CARRY OUTS</p>  <p>824-3425</p>
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MODELS OPEN

WED & THURS: 4-7 SAT & SUN: 1-5

EAGLE POINTE

An Outstanding New Home Community

Breathtaking Views
River & Greenbelt Frontage

John Hagmeier Homes
Roy Chambers 696-9311

The Petersen Group
Janet Petersen 562-1170



ENTRANCE 3/4 MILES



Secrets of Successful Communities & Regions

1. Develop a shared vision for the future
2. Inventory regional & local assets
3. Build plans around the enhancement of assets
4. Use education, incentives, partnerships, and voluntary initiatives, not just regulation
5. Invest in infrastructure & themselves
6. Pick and choose among development proposals
7. Cooperate for mutual benefit
8. Consider community character as well as ecology and economics
9. Have strong leaders and committed citizens

Most Polluted City



Model for Sustainable Development





GRAM WHOLESALE CO., INC.







The initial segment of the Tennessee Riverpark near the C.B. Robinson Bridge has become the most loved and used park in Hamilton County. More than one million people of all ages, races and economic status visit the park annually.



Why would anyone invest in a community that wouldn't invest in itself?



Inventory Assets

- Natural Resources
- Cultural Resources
- Human Resources
- Economic Resources
- Educational Resources

Sometimes the Assets are Obvious





Sometimes They Are Not Obvious





Successful Regions Invest in Infrastructure



Salt Lake City - Light Rail System

Explore Beyond Regulation

- Education
- Incentives
- Partnerships
- Voluntary Initiatives

Why Do We Educate?

Envision Our Visioning Process



Why Should We Use Incentives?



**SUCCESSFUL
COMMUNITIES PICK
AND CHOOSE AMONG
DEVELOPMENT
PROPOSALS**

Would you rather have this?



Or This?



Hometown Heroes

“Never doubt that a small group of committed individuals can change the world. Indeed, it is the only thing that ever has”

-Margaret Mead

It's Not Always Easy

Welcome to
Buena Vista
6002 HAPPY CITIZENS
AND 3 OLD GROUCHES
J.H. DICKINSON JR. 1971

Leadership is important But often unappreciated



“Apart from sanitation, medicine, education, wine, public order, roads, irrigation, public health and a freshwater system, what have the Romans ever done for us?”

Monty Python's, Life of Brian

A Final Thought

- Vision counts, but implementation is priceless!

Thank You

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