

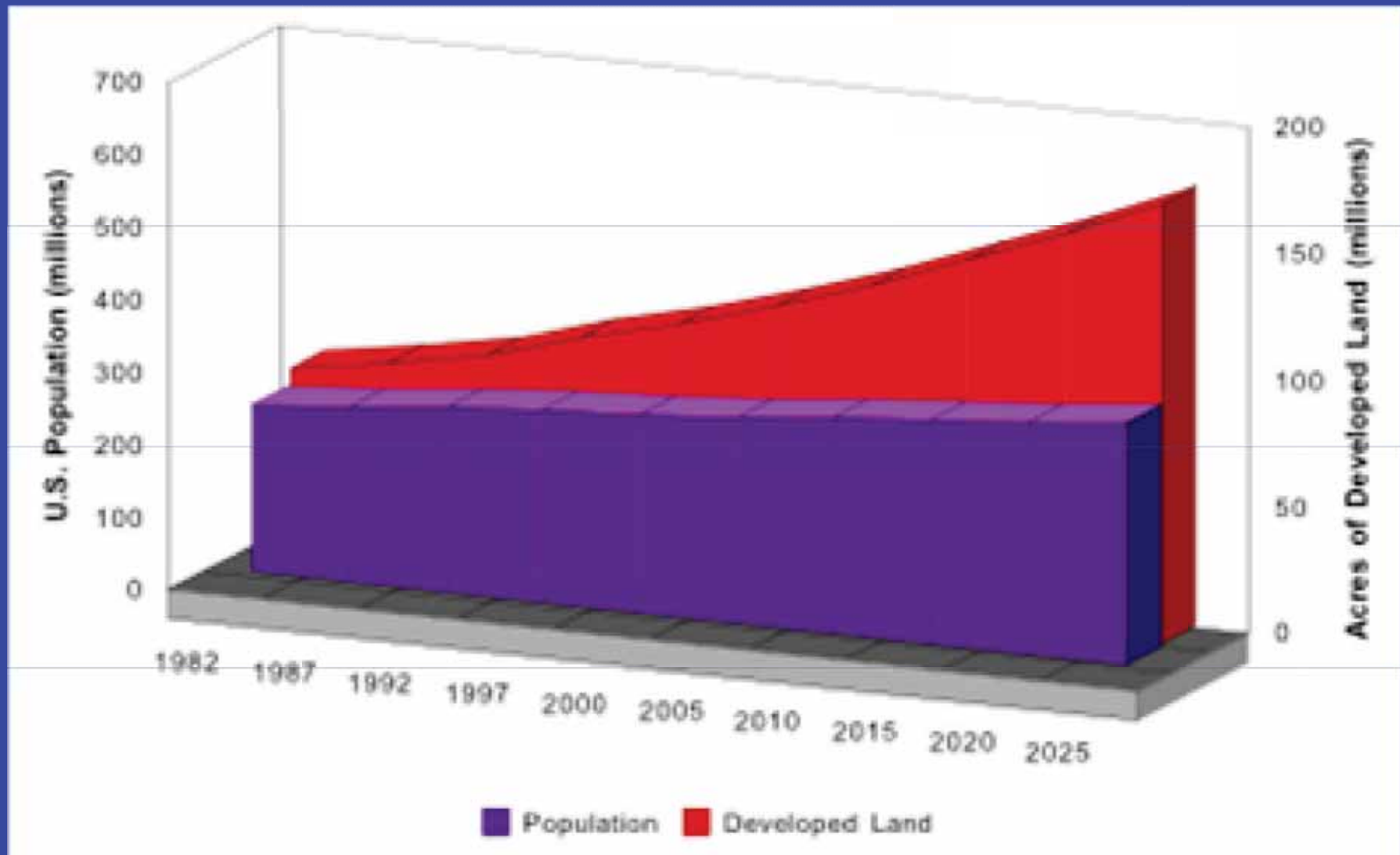
From Ecology to Energy- Walking as if the World Mattered

Geoffrey Anderson
President and CEO

Smart Growth America

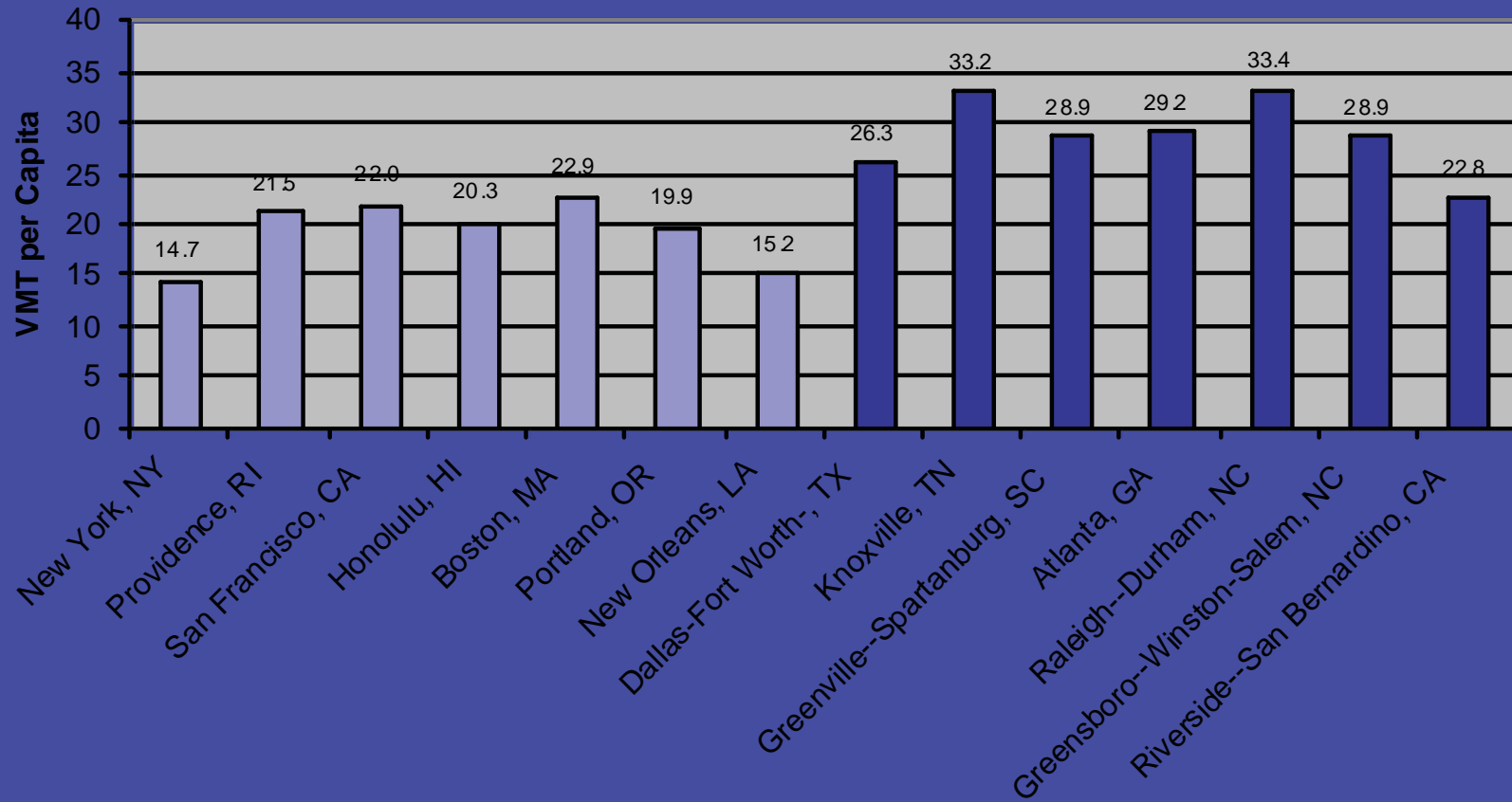


Rate of Land Development vs. Rate of Population Growth

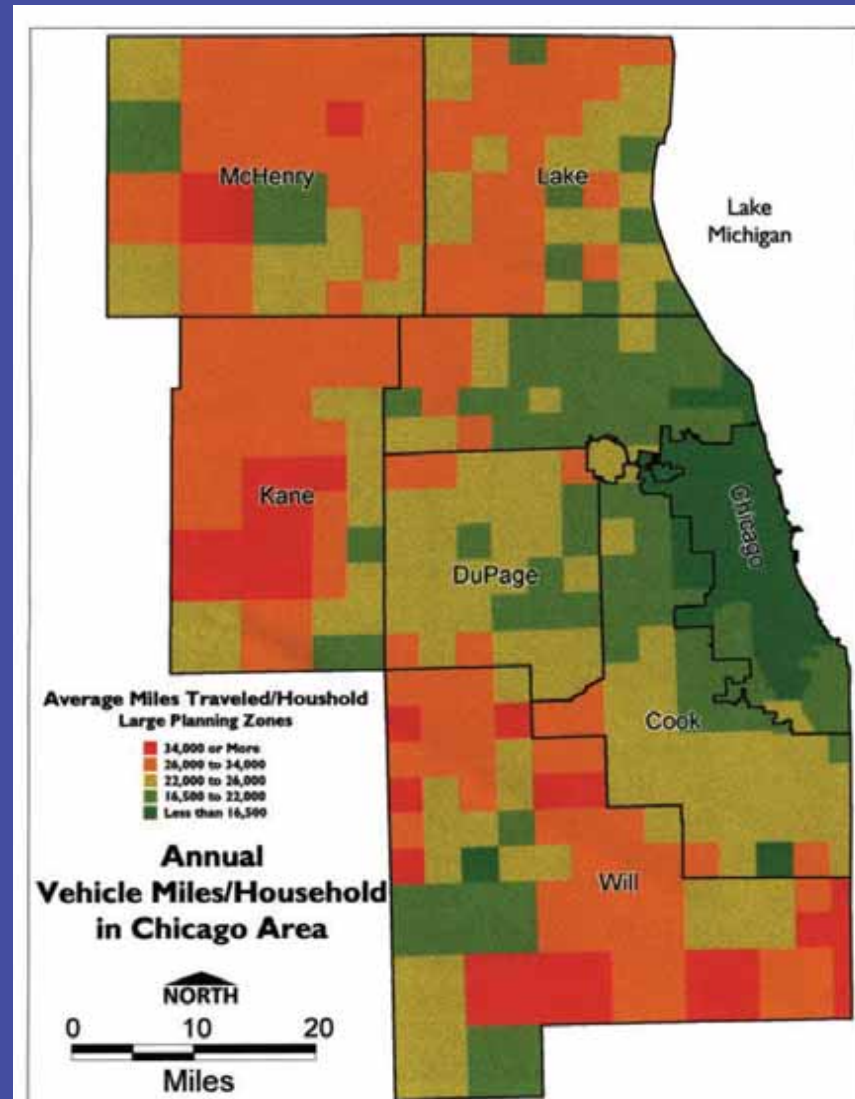


It's how and where we are growing that are driving our significantly increasing rate of land consumption, not domestic population growth.

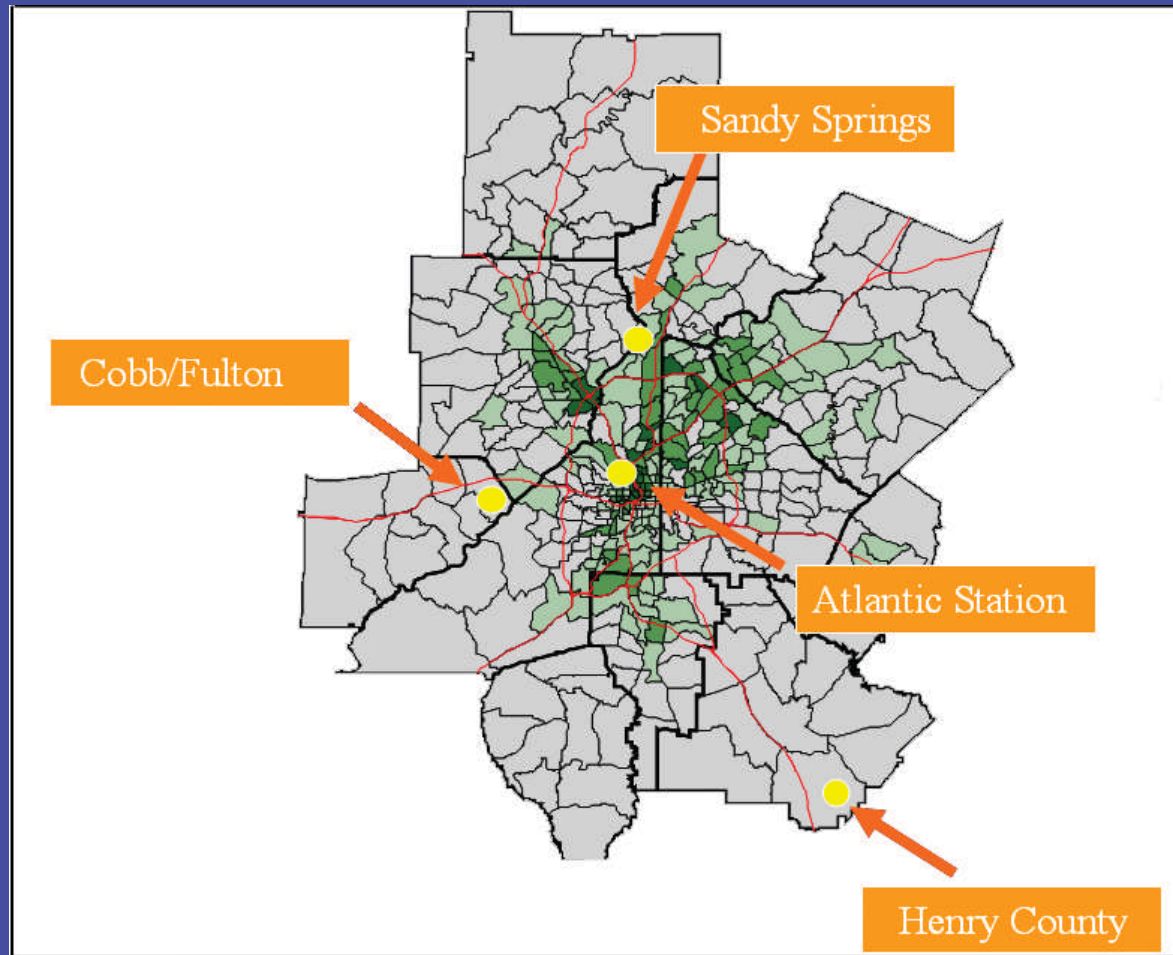
35% Less VMT with Compact Development



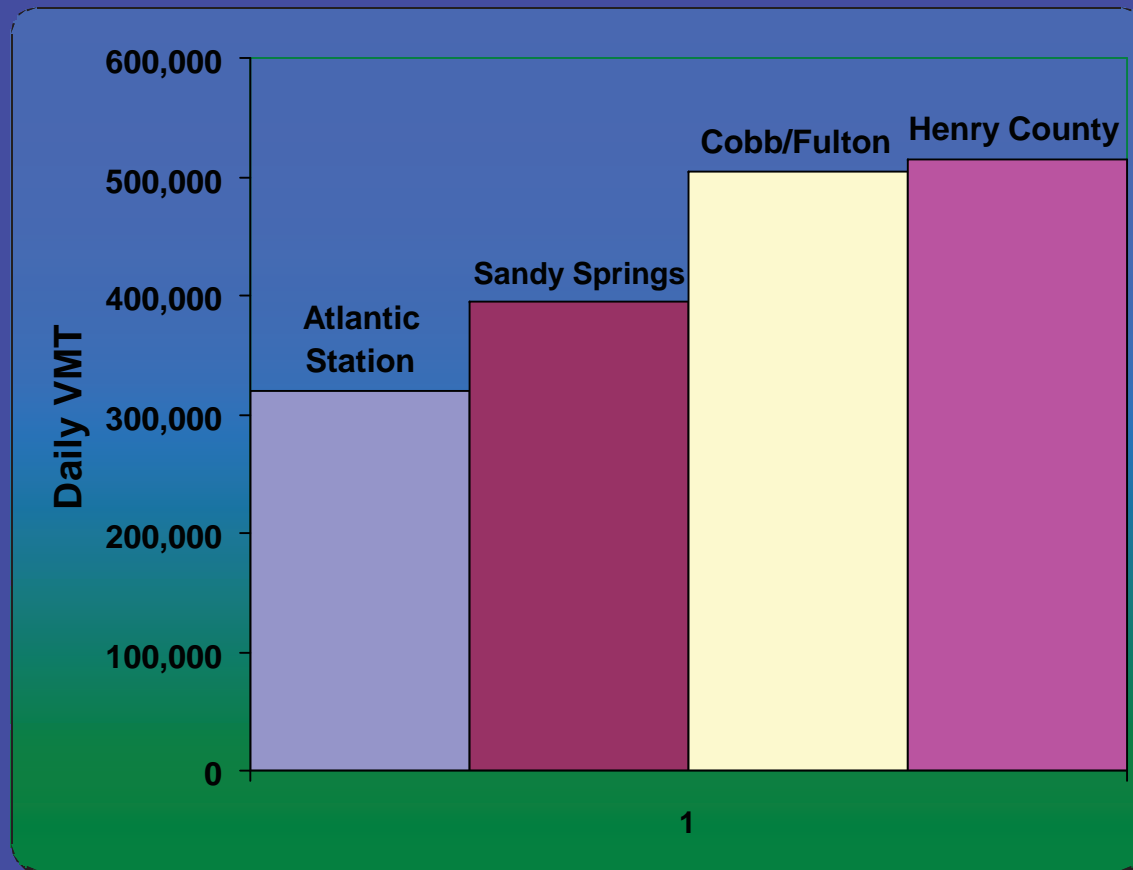
Disaggregate Travel Studies



Atlantic Station vs. Henry County

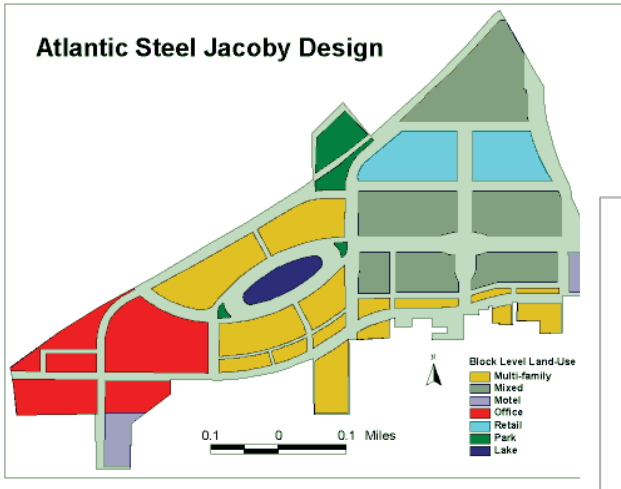


1/3 Savings Due to Regional Accessibility

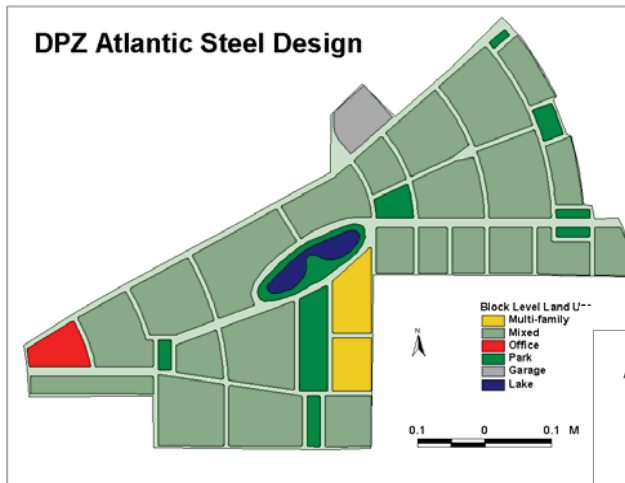


Alternative Site Plan Comparison

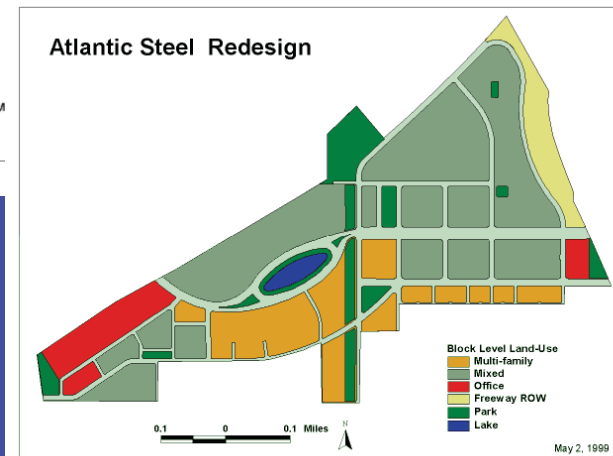
Atlantic Steel Jacoby Design



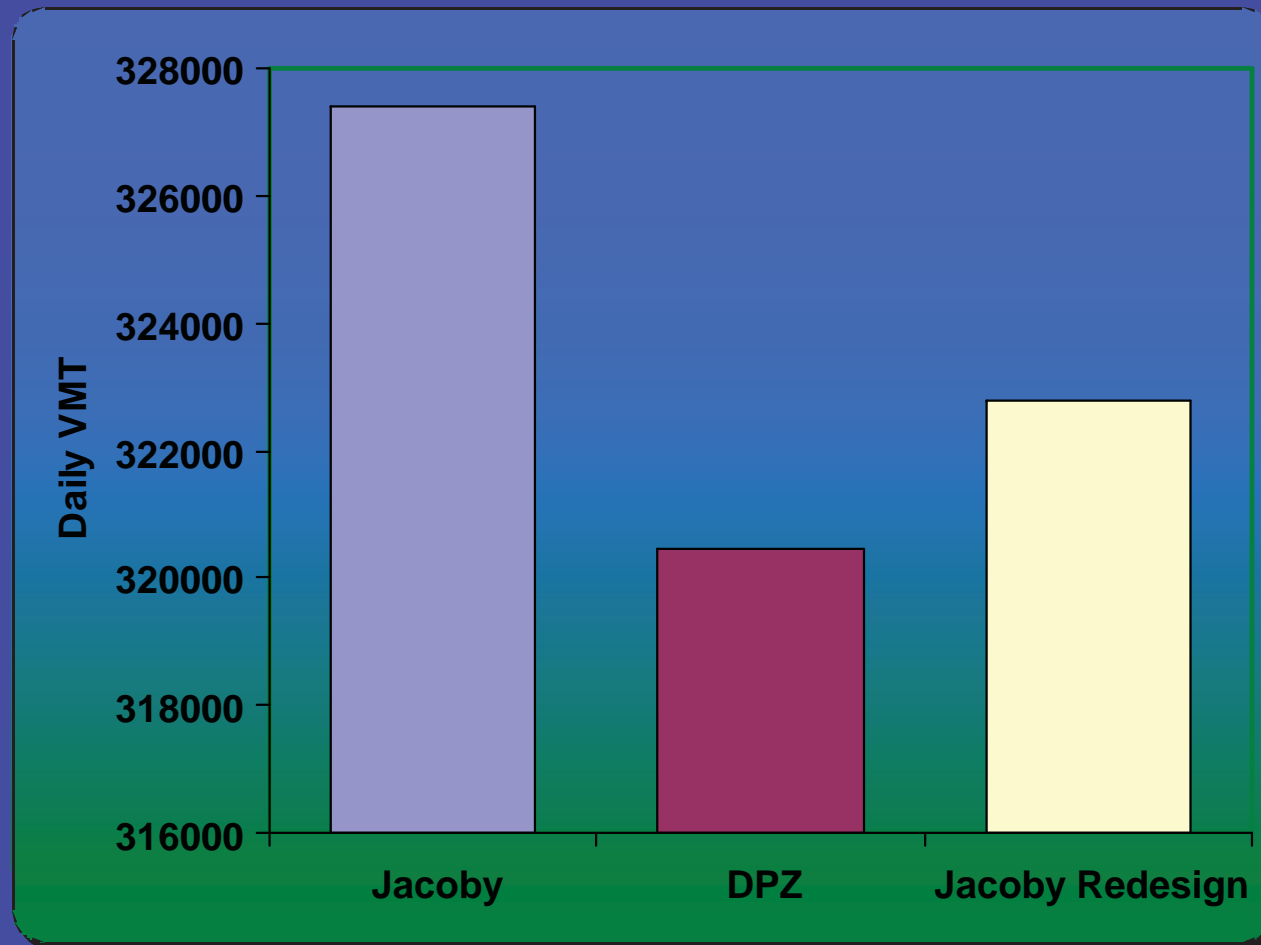
DPZ Atlantic Steel Design



Atlantic Steel Redesign



5% Savings Due to Site Design



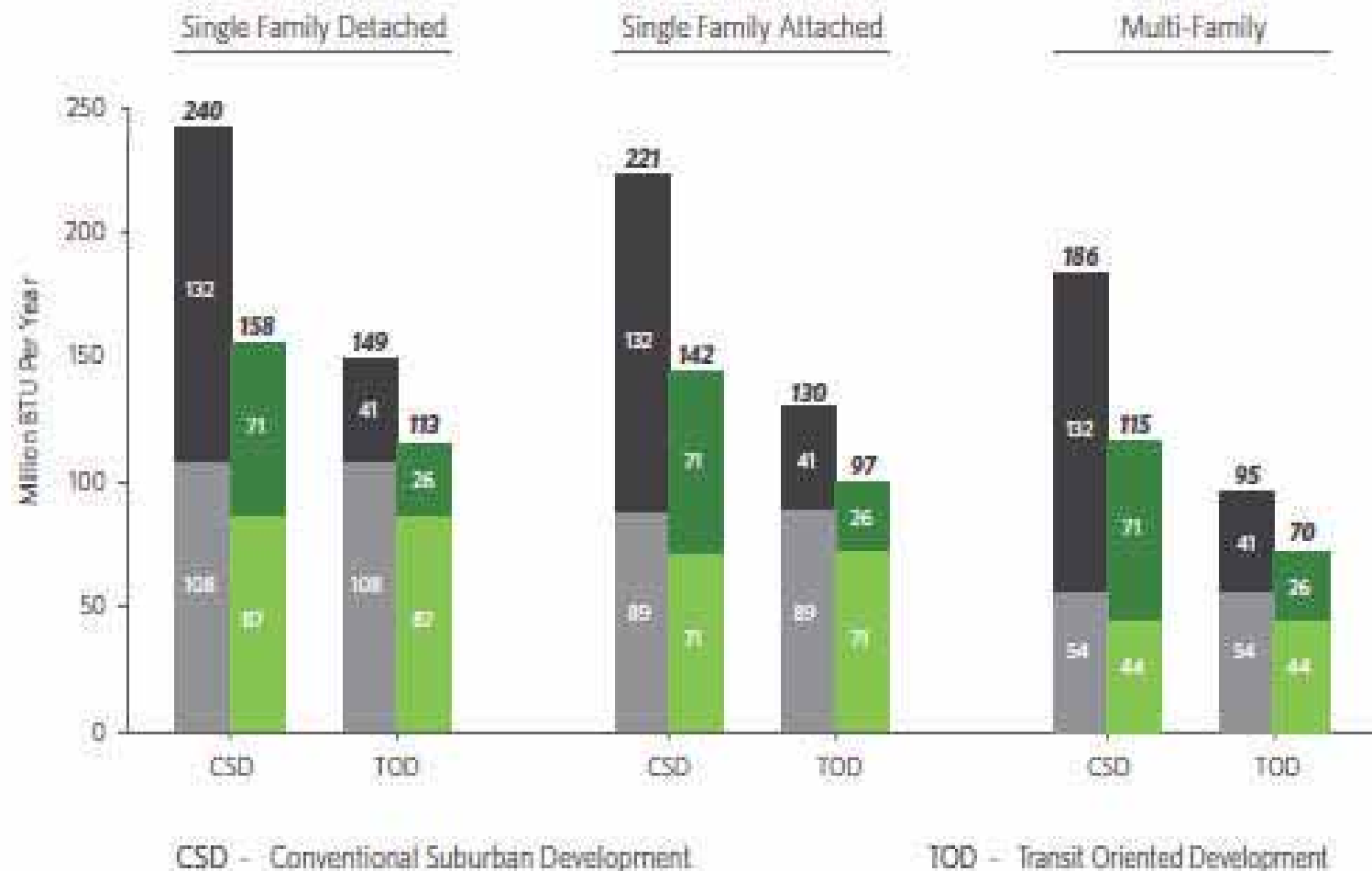
Regional Simulations



Air Pollution

- Built environment → travel behavior and per capita air pollution → pollution exposure in a population
- King County (Seattle): 25% increase in walkability associated with 6.5% fewer VMTs, 5.6% fewer grams of Nox and 5.5% fewer grams of VOC per capita

Frank et al. 2006; Frank, Kavage, & Litman 2010

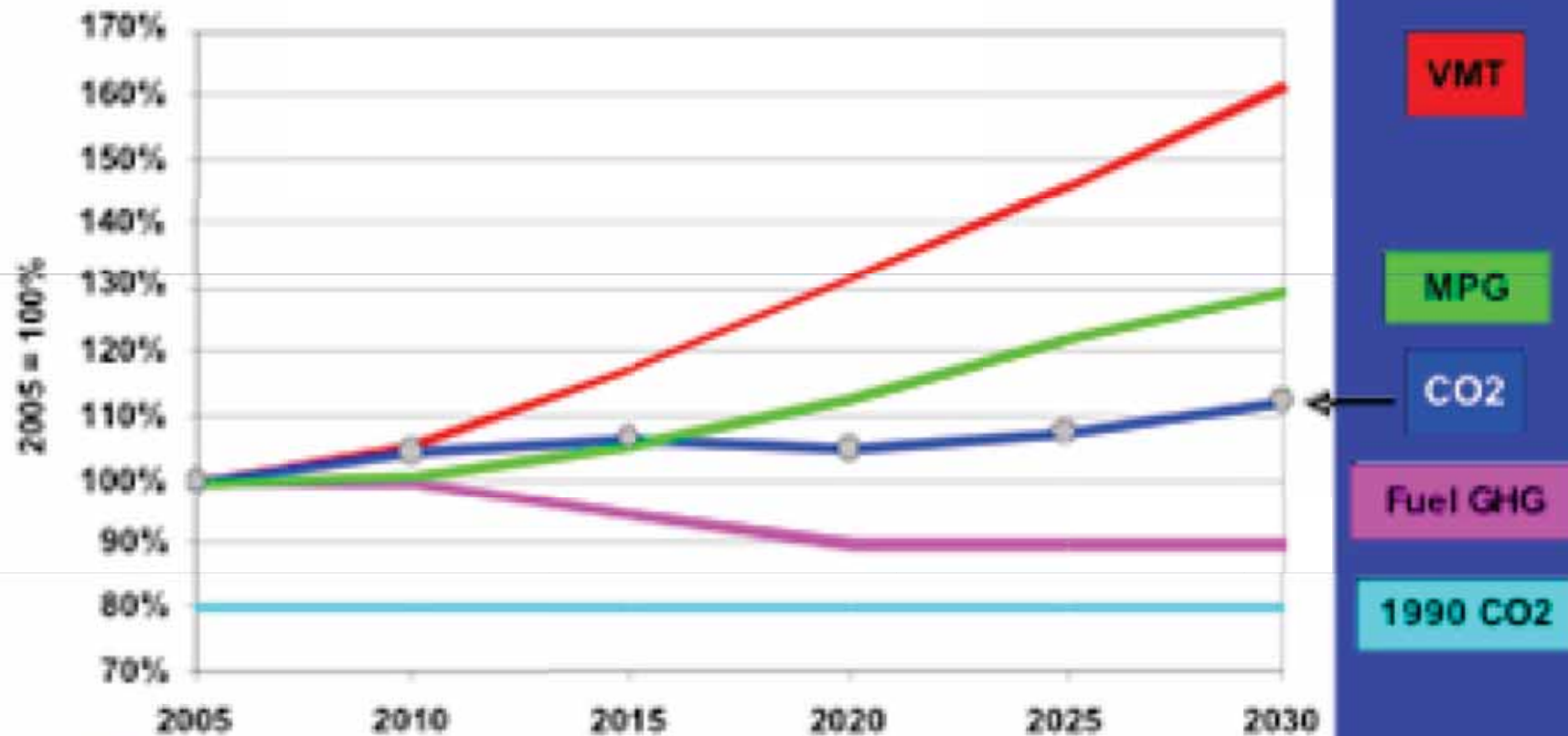


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Prepared by:

Jonathan Rose Companies
Revised March 2011

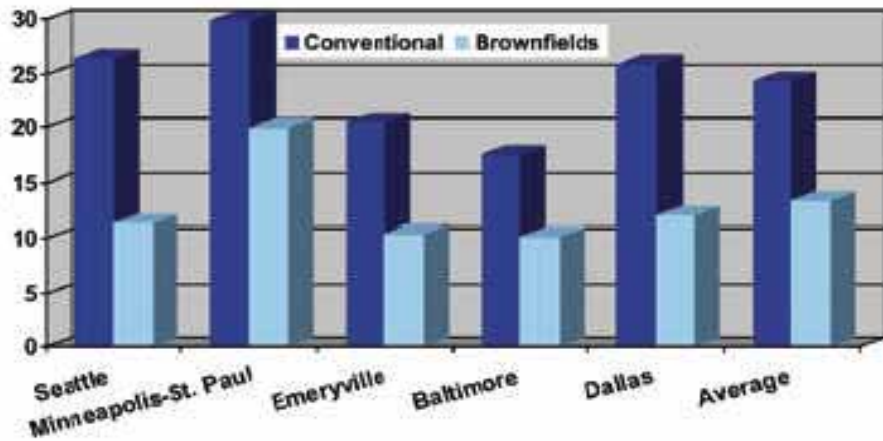
Senate CAFE (35 mpg) + CA Fuel Standards (-10%): 40% above 1990 Levels in 2030



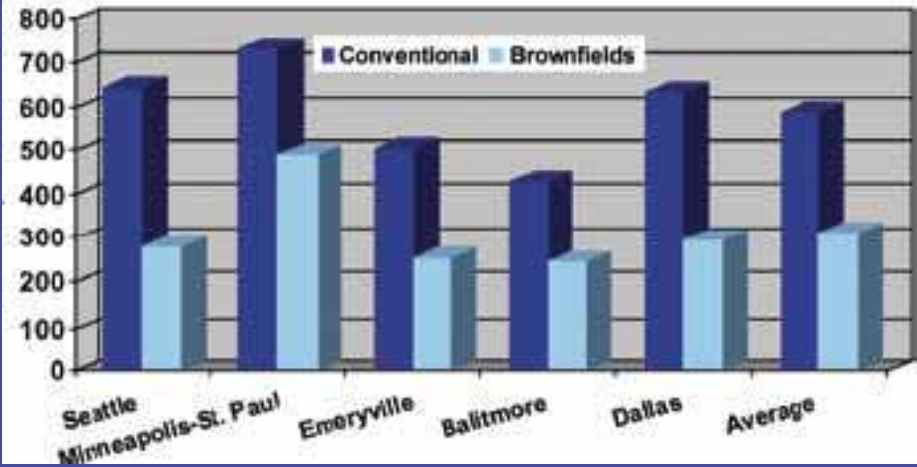
Sources: VMT: EIA with 10% rebound MPG: US Senate, Fuel: CA

Brownfields

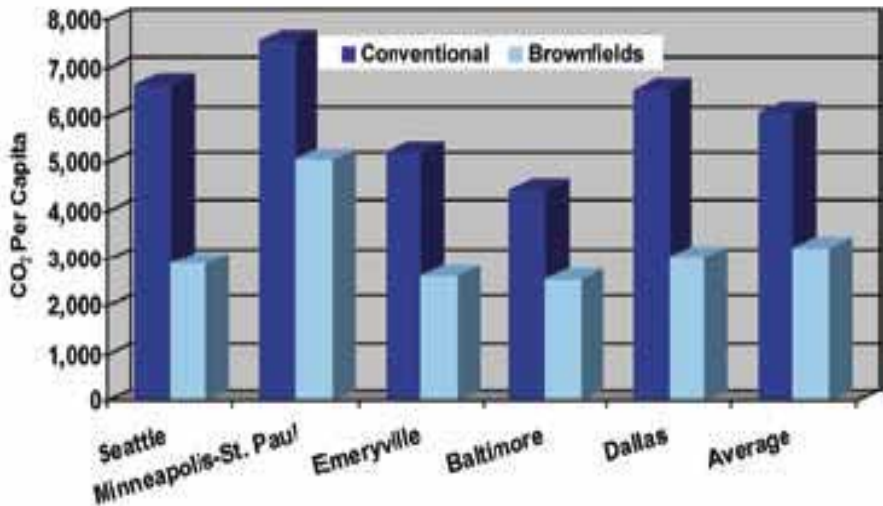
Vehicle Miles Traveled
(Miles Per Capita Per Day)



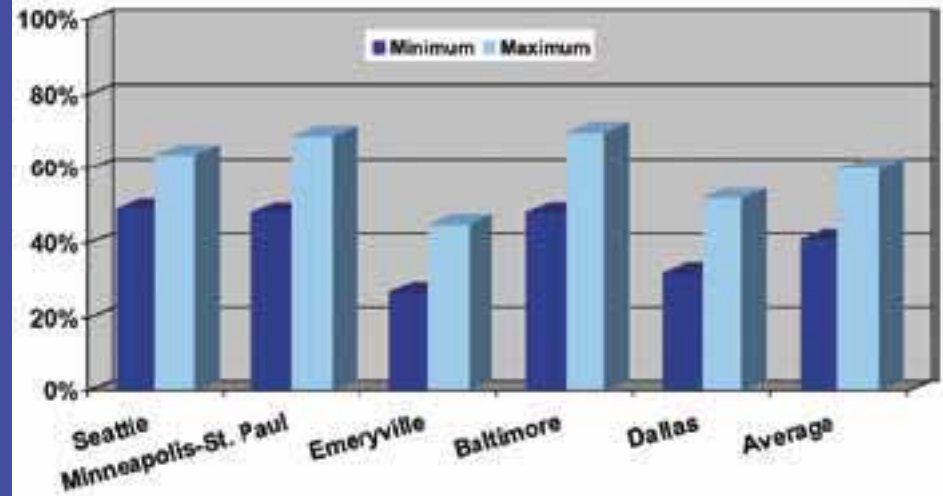
Air Pollutant Emissions
(NOx, CO, HC, Pounds Per Capita Per Year)



Carbon Dioxide Emissions
(Pounds Per Capita Per Year)

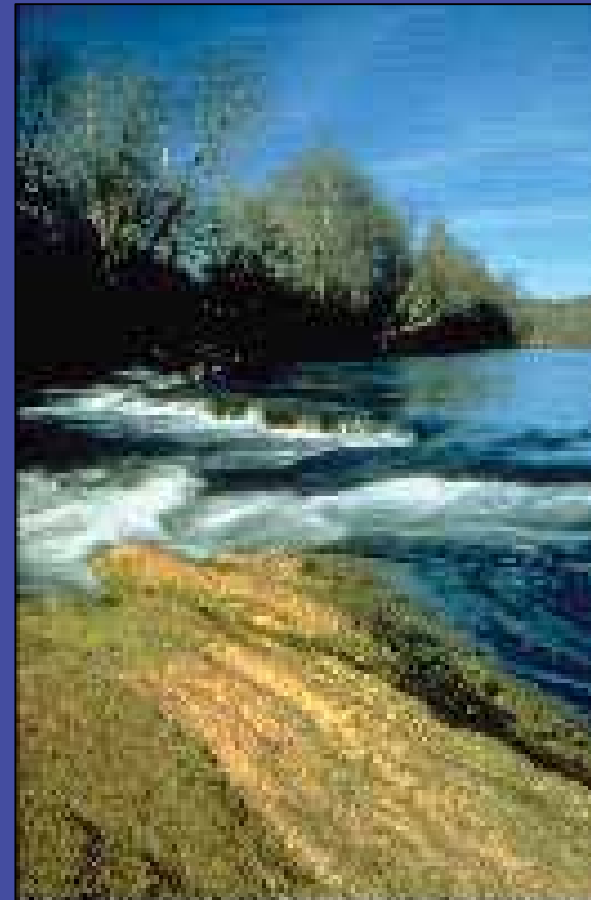


Stormwater Runoff
(Percent Reduction for Brownfields)



Water Impact of Development

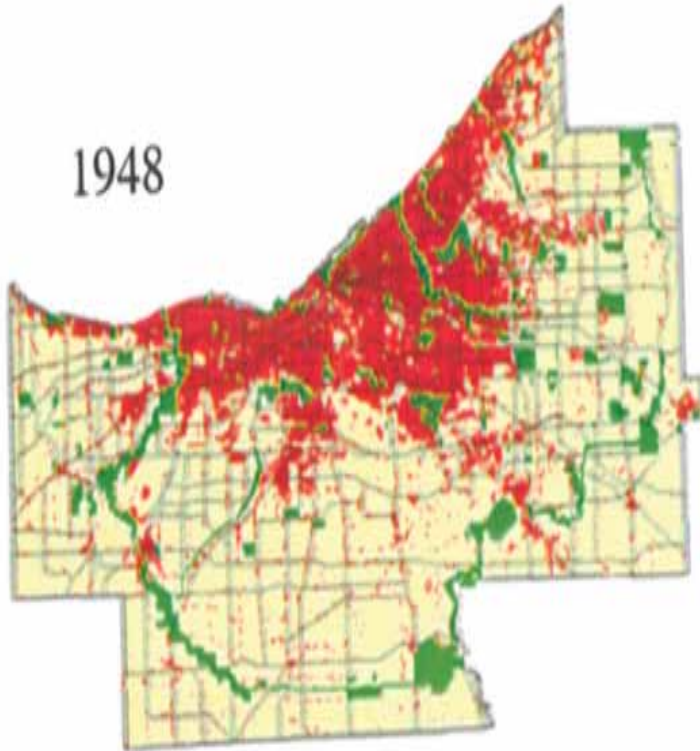
- Proportion of water quality impairment due to urban runoff:
 - Estuaries: 32 percent
 - Rivers: 13 percent
 - Lakes: 18 percent
 - Ocean shorelines: 56 percent



Chattahoochee River, GA

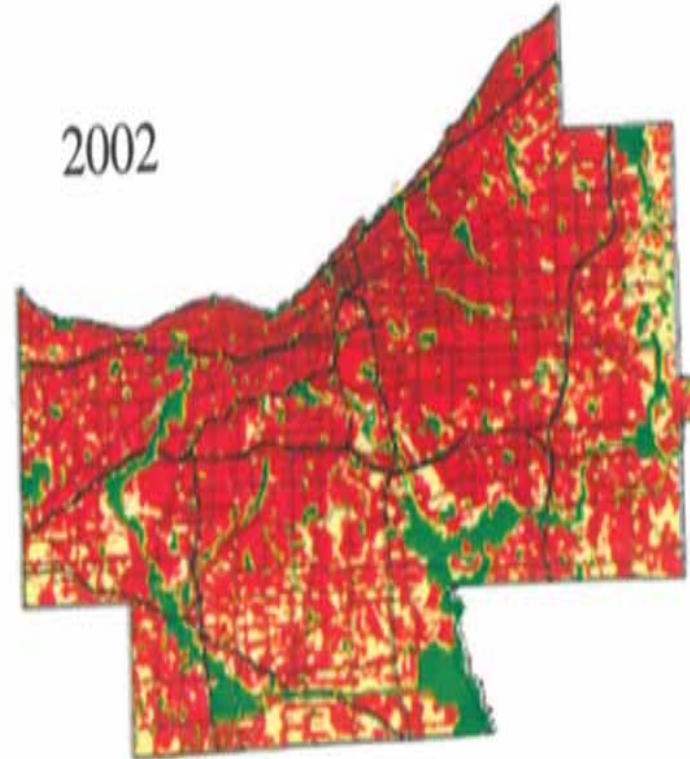
Cleveland: Same Population

1948



1950: 1,389,582

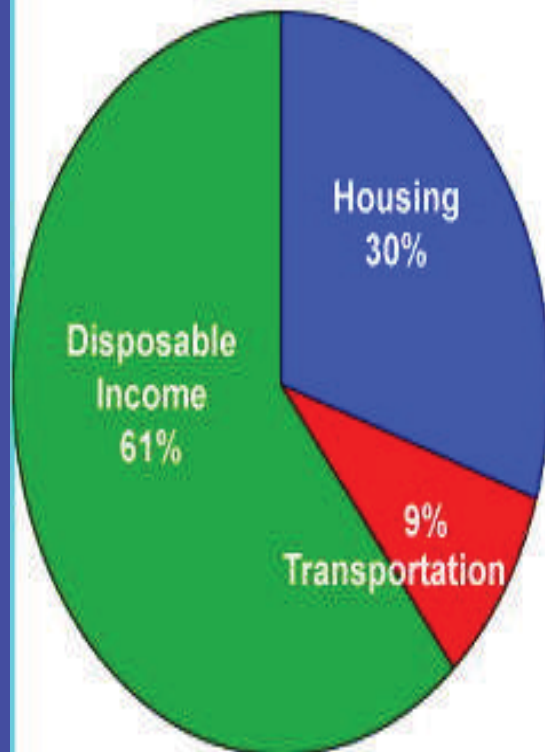
2002



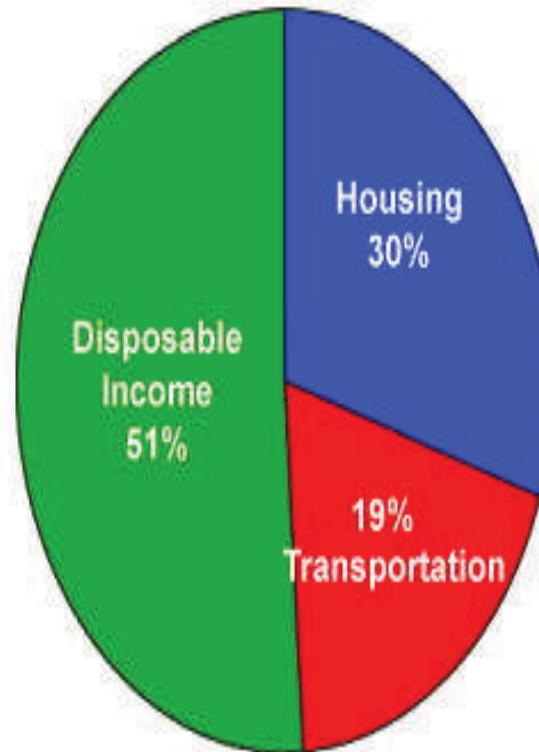
2002: 1,393,978

Transportation Costs

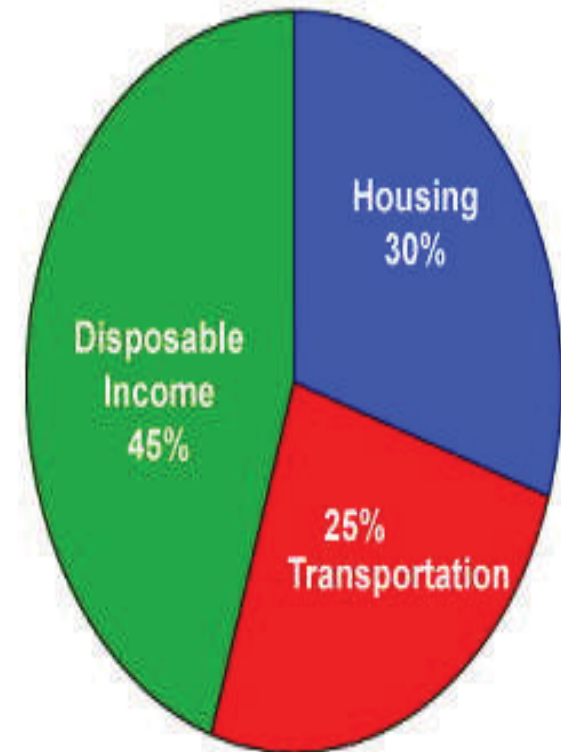
Transit Rich Environment



Average American Family



Auto Dependent Suburbs



Housing Costs are deemed affordable at 30% or less of household income. How much does transportation affect your budget?

Reduce Infrastructure Costs

“the application of smart growth strategies over the next 25 years could save as much as \$250 billion, mainly in the form of infrastructure investment.”

Federal Reserve Vice Chairman of the Board of Governors, Edward Gramlich

Savings of:

- 12% on road-building
- 6% on water and sewer
- 4 % on annual operations



Relationship Between Urban Sprawl and Physical Activity, Obesity, and Morbidity

Name: hepr/18_216 08/12/2003 03:54PM Plate # 0000000000

THE SCIENCE OF HEALTH PROMOTION

Building the Evidence—U.S. Approaches

Relationship Between Urban Sprawl and Physical Activity, Obesity, and Morbidity

Reid Ewing, Tom Schmid, Richard Killingsworth, Amy Zlot, Stephen Raudenbush

Abstract

Purpose. To determine the relationship between urban sprawl, health, and health-related behaviors.

Design. Cross-sectional analysis using hierarchical modeling to relate characteristics of individuals and places to levels of physical activity, obesity, body mass index (BMI), hypertension, diabetes, and coronary heart disease.

Setting. U.S. counties (448) and metropolitan areas (87).

Subjects. Adults ($n = 206,992$) from pooled 1998, 1999, and 2000 Behavioral Risk Factor Surveillance System (BRFSS).

Measures. Sprawl indices, derived with principal components analysis from census and other data, served as independent variables. Self-reported behavior and health status from BRFSS served as dependent variables.

Results. After controlling for demographic and behavioral covariates, the county sprawl index had small but significant associations with minutes walked ($p = .004$), obesity ($p < .001$), BMI ($p = .005$), and hypertension ($p = .018$). Residents of sprawling counties were likely to walk less during leisure time, weigh more, and have greater prevalence of hypertension than residents of compact counties. At the metropolitan level, sprawl was similarly associated with minutes walked ($p = .04$) but not with the other variables.

Conclusion. This ecologic study reveals that urban form could be significantly associated with some forms of physical activity and some health outcomes. More research is needed to refine measures of urban form, improve measures of physical activity, and control for other individual and environmental influences on physical activity, obesity, and related health outcomes. (*Am J Health Promot* 2003;18(1):47-57.)

Key Words: Physical Activity, Urban Design, Sprawl, Obesity, Prevention Research

Reid Ewing completed this work while with the Boustein School of Planning and Public Policy, Rutgers University, New Brunswick, New Jersey. He is currently with the National Center for Smart Growth, University of Maryland, College Park, Maryland. Tom Schmid is from the Centers for Disease Control and Prevention, NCCDPHP, DNPA, Physical Activity and Health Branch. Richard Killingsworth is with Active Living By Design, University of North Carolina, Chapel Hill, North Carolina. Amy Zlot is with the Centers for Disease Control and Prevention, NCCDPHP, OHRM, Atlanta, Georgia. Stephen Raudenbush is with the Department of Education, Department of Statistics, and Survey Research Center, University of Michigan, Ann Arbor.

Send reprint requests to Dr. Reid Ewing, University of Maryland, National Center for Smart Growth, Prentken Field House, College Park, MD 20742; (301) 405-6788 (tel).

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0890-1777/03/18(1):47-57

September/October 2003, Vol. 18, No. 1 47

- Published in the *American Journal of Health Promotion*
- Peer-Reviewed
- Complete with caveats

Smart Growth Principles

- Mix land uses
- Take advantage of compact building design
- Create a range of housing opportunities and choices
- Create walkable neighborhoods
- Foster distinctive, attractive communities with a strong sense of place
- Preserve open space, farmland, natural beauty, and critical environmental areas
- Strengthen and direct development towards existing communities
- Provide a variety of transportation choices
- Make development decisions predictable, fair, and cost-effective
- Encourage community and stakeholder collaboration in development decisions

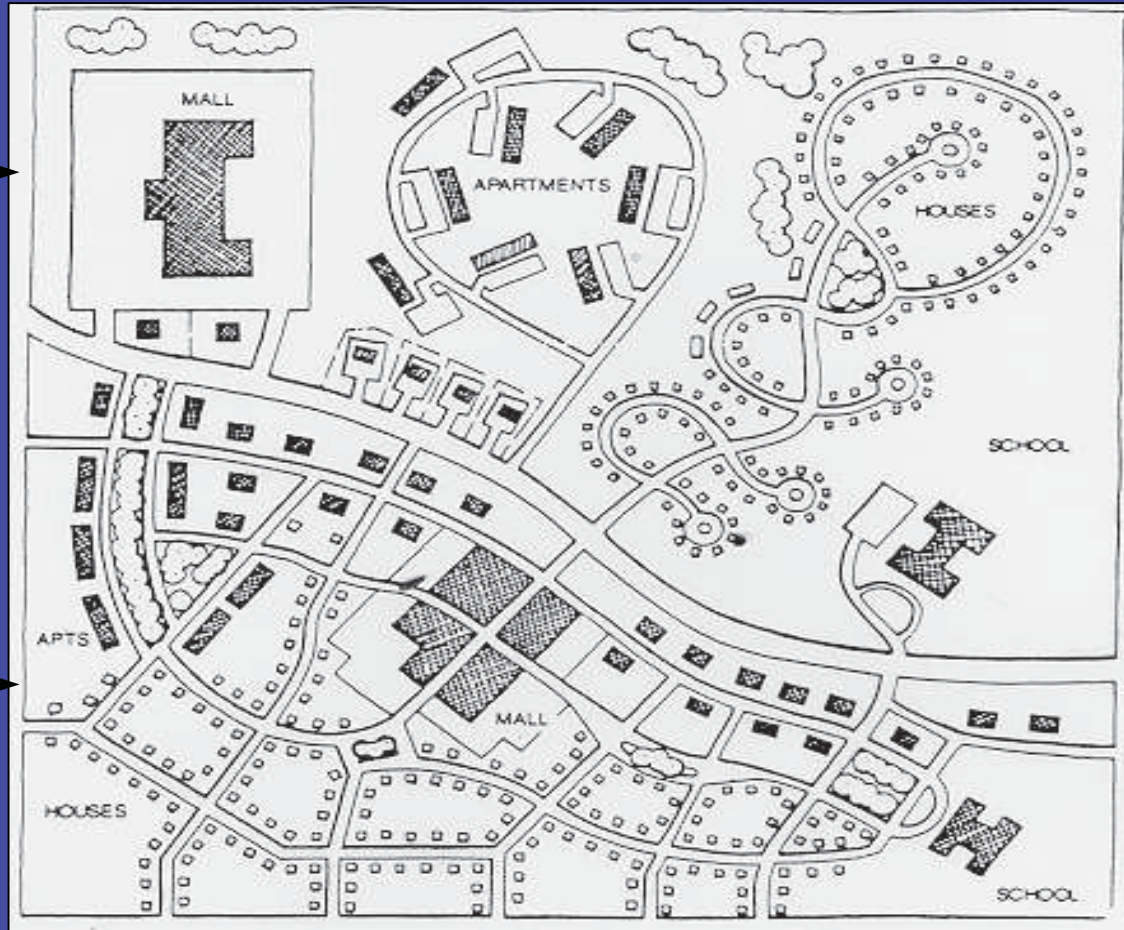
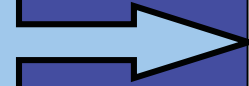
Arlington, VA-- Smart growth at the corridor level



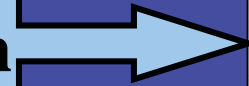
Smart growth encourages development around transit stations

Smart growth at the neighborhood level

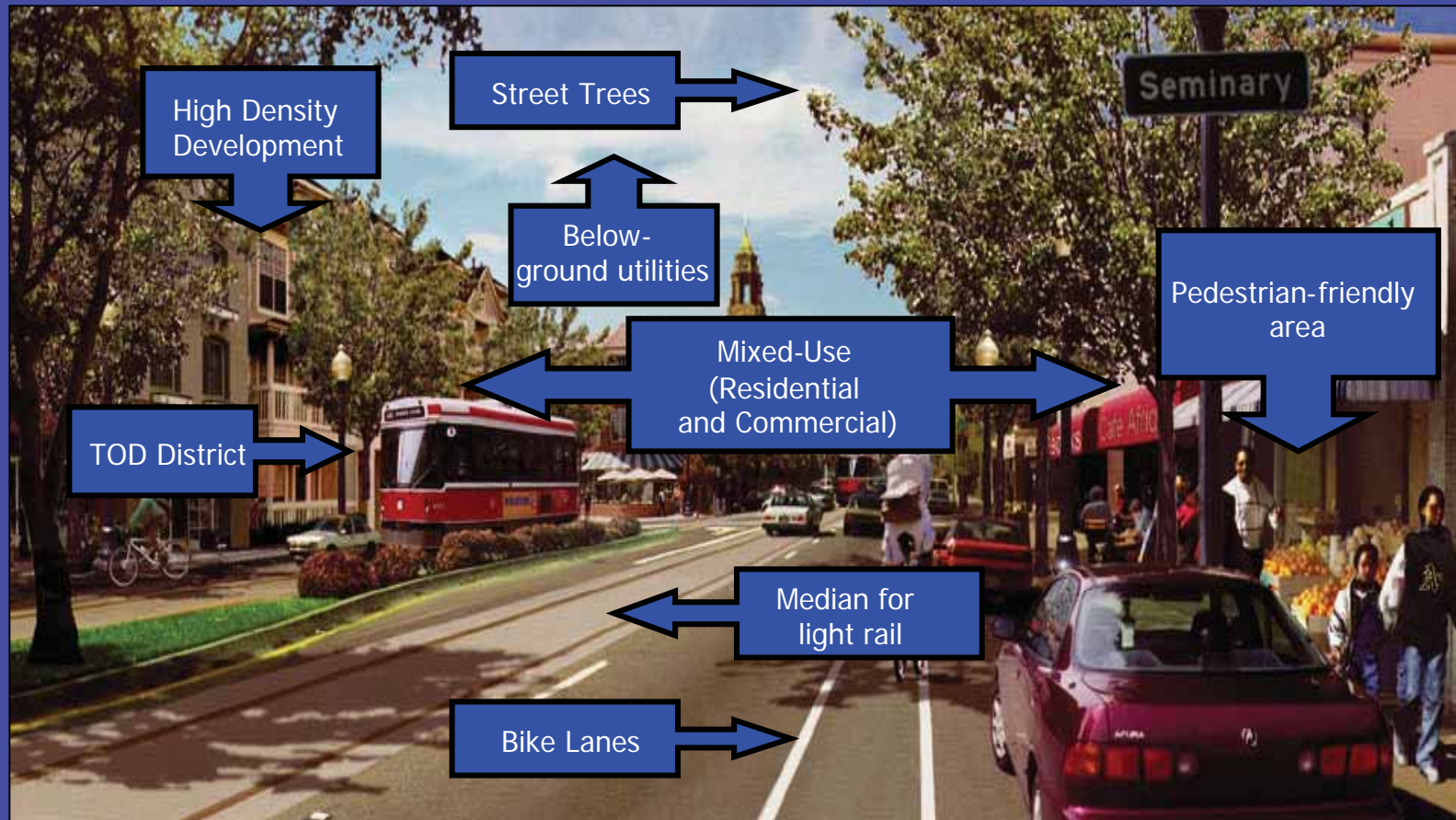
Status Quo



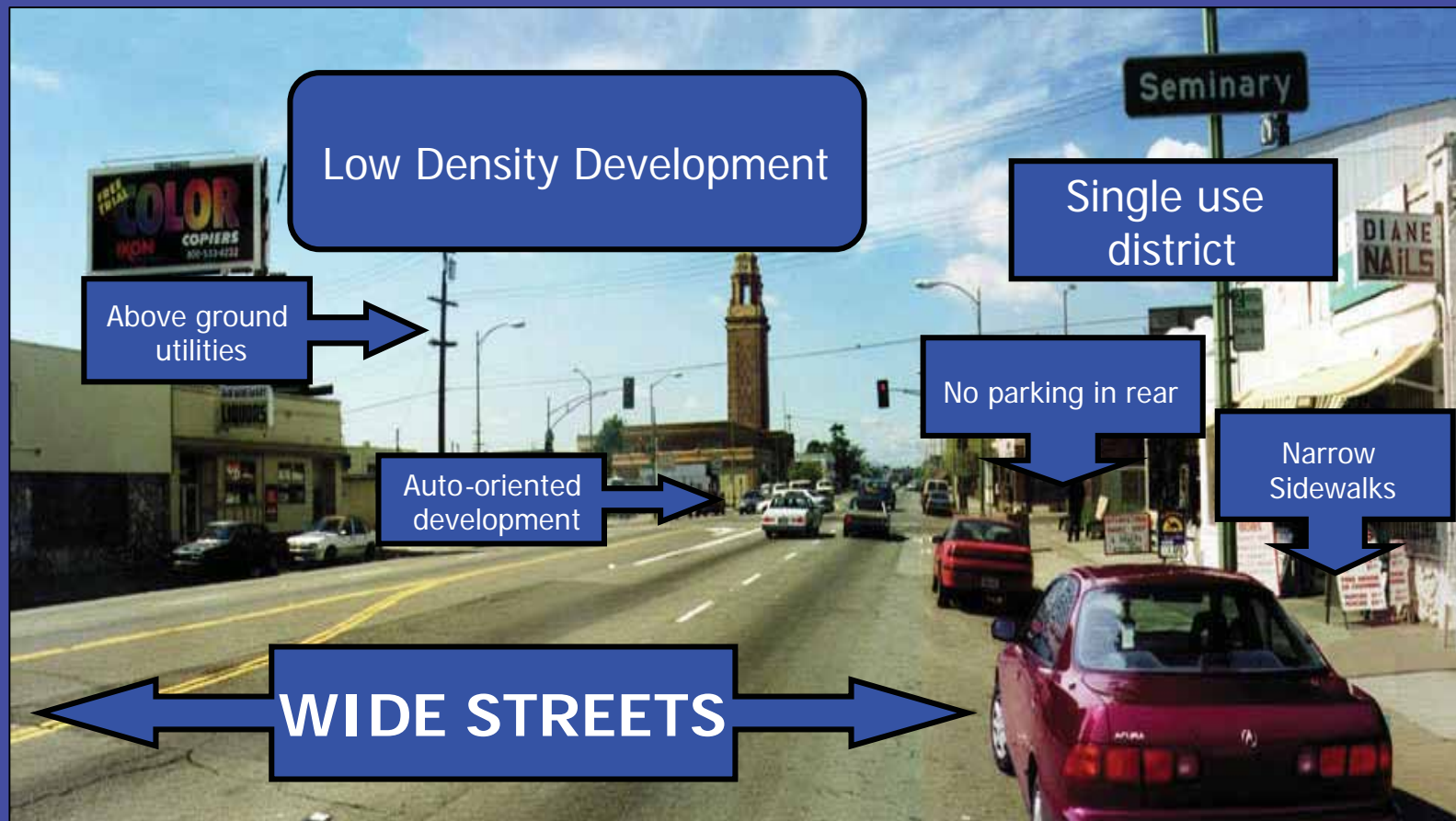
Smart Growth

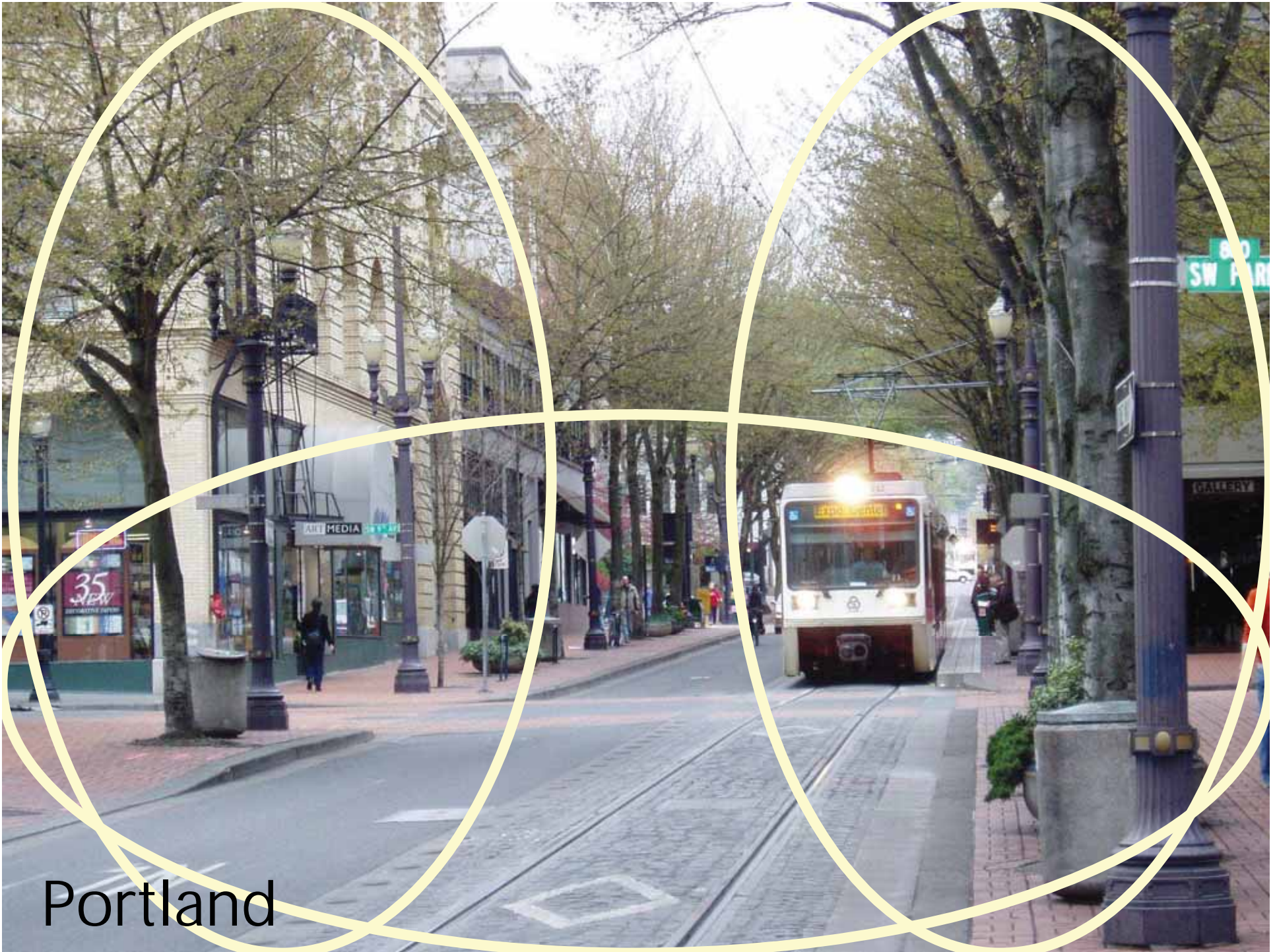


Smart growth at the street level



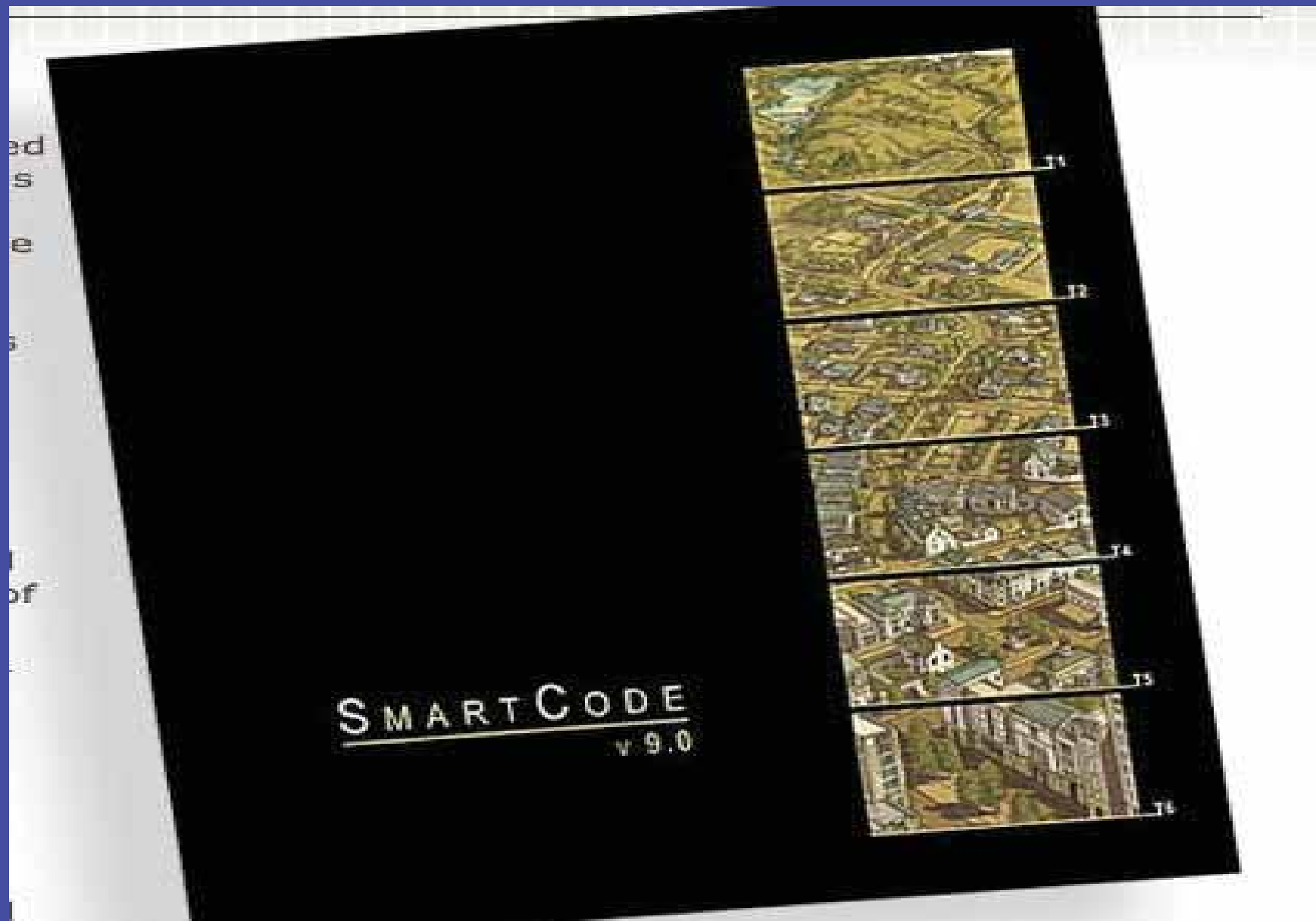
Communities Maintain Existing Conditions



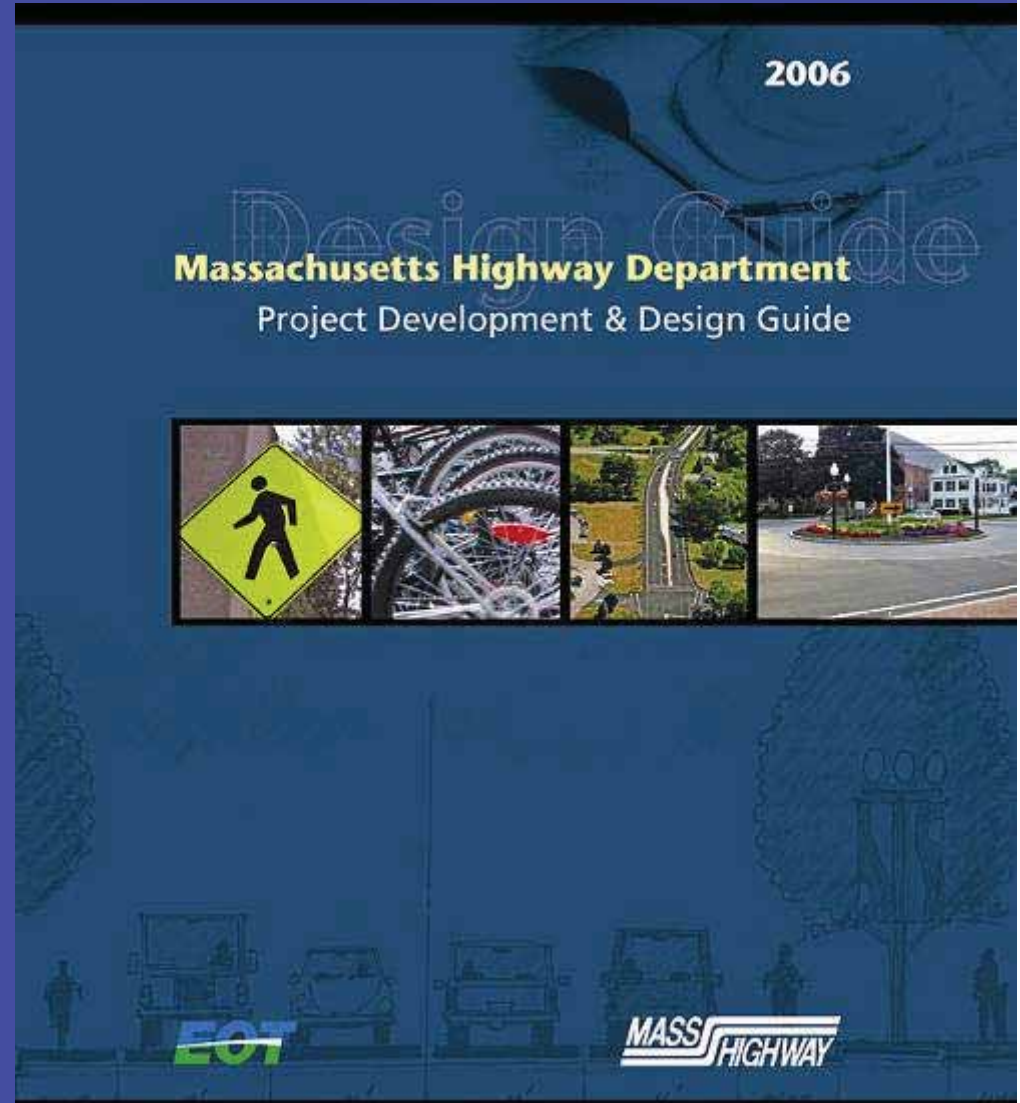
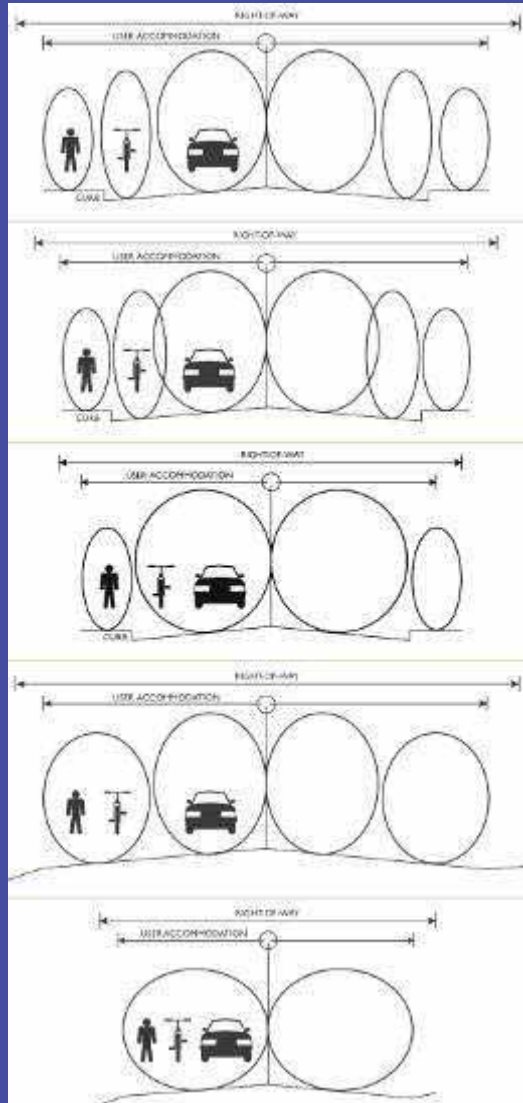


Portland

Design Guides



Massachusetts Project Development & Design Guide



Policy Guides



...and still more

Getting to Smart Growth II:

100 MORE POLICIES FOR IMPLEMENTATION



What Have We Accomplished?

New Columbia (Portland, OR)



Atlantic Station



New Town Center for Lakewood CO



Stores open to wide sidewalks and have parking located in back of stores or in nearby lots. This design encourages people to walk around Belmar when they shop.

"Everything about it is just fabulous. The whole design, the concept, the whole look of the area. It's the new downtown Lakewood."

Samantha Bales
Belmar homebuyer



Belmar's role as a gathering place for Lakewood's citizens is enhanced by many festivals and events.



The economic decline of a mall created an opportunity for renewal in Lakewood.

Belmar's first phase has been a success. Its retail income is comparable to higher-end malls. Belmar's office space is fully leased and rental and for-sale housing are outperforming the local market. Upon its completion, the city estimates it will add \$952 million to the local economy and will directly create over 7,000 permanent jobs.

Policy Adoption

COMMONWEALTH OF VIRGINIA Office of the Governor

Timothy M. Kaine
Governor

FOR IMMEDIATE RELEASE
June 11, 2008

Gordon Hickey
(804) 225-4260

ne: (804) 291-8977

www.governor.virginia.gov

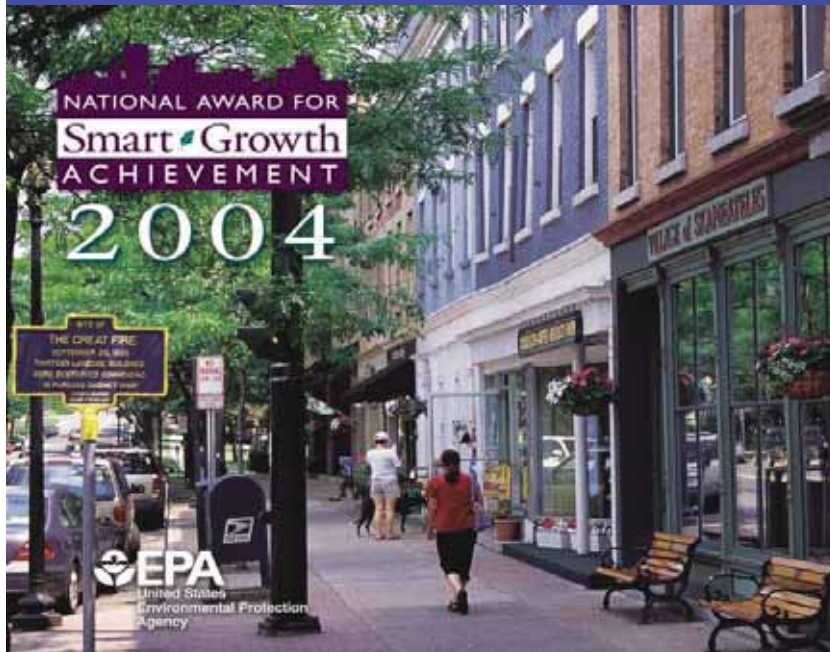
GOVERNOR KAINÉ SIGNS EXECUTIVE ORDER ESTABLISHING SUB-CABINET ON COMMUNITY INVESTMENT

~ Directs Sub-Cabinet to promote economically and environmentally sustainable communities through improved land use planning ~

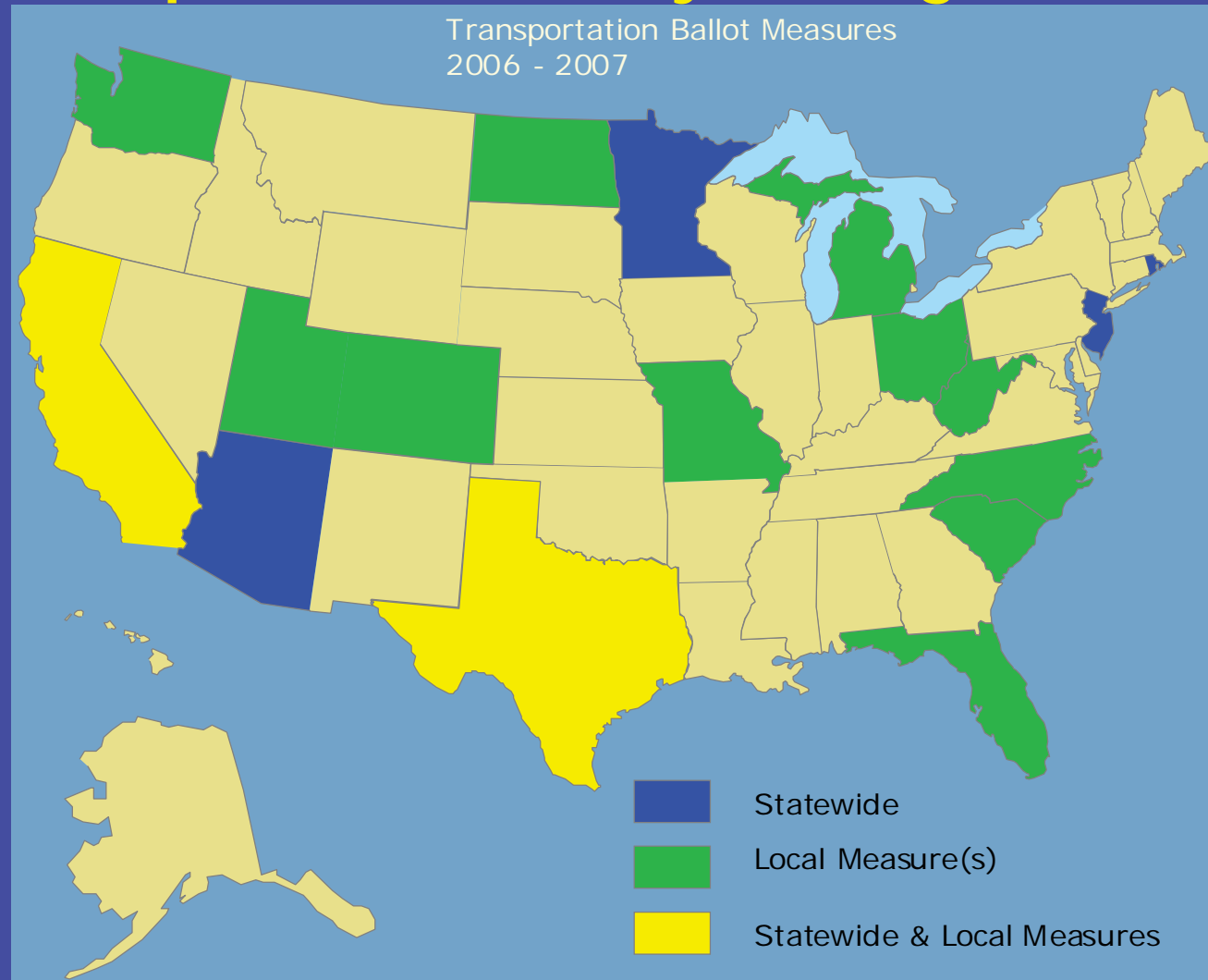
Davidson, NC

It's very easy to become a very, very wealthy place with smart growth, because it's so attractive and wonderful that people will come in and bid up housing prices. And that's why we implemented our 12.5% affordable housing requirement."

Mayor Randy Kincaid, 11-18-04



Transportaiton Policy Change

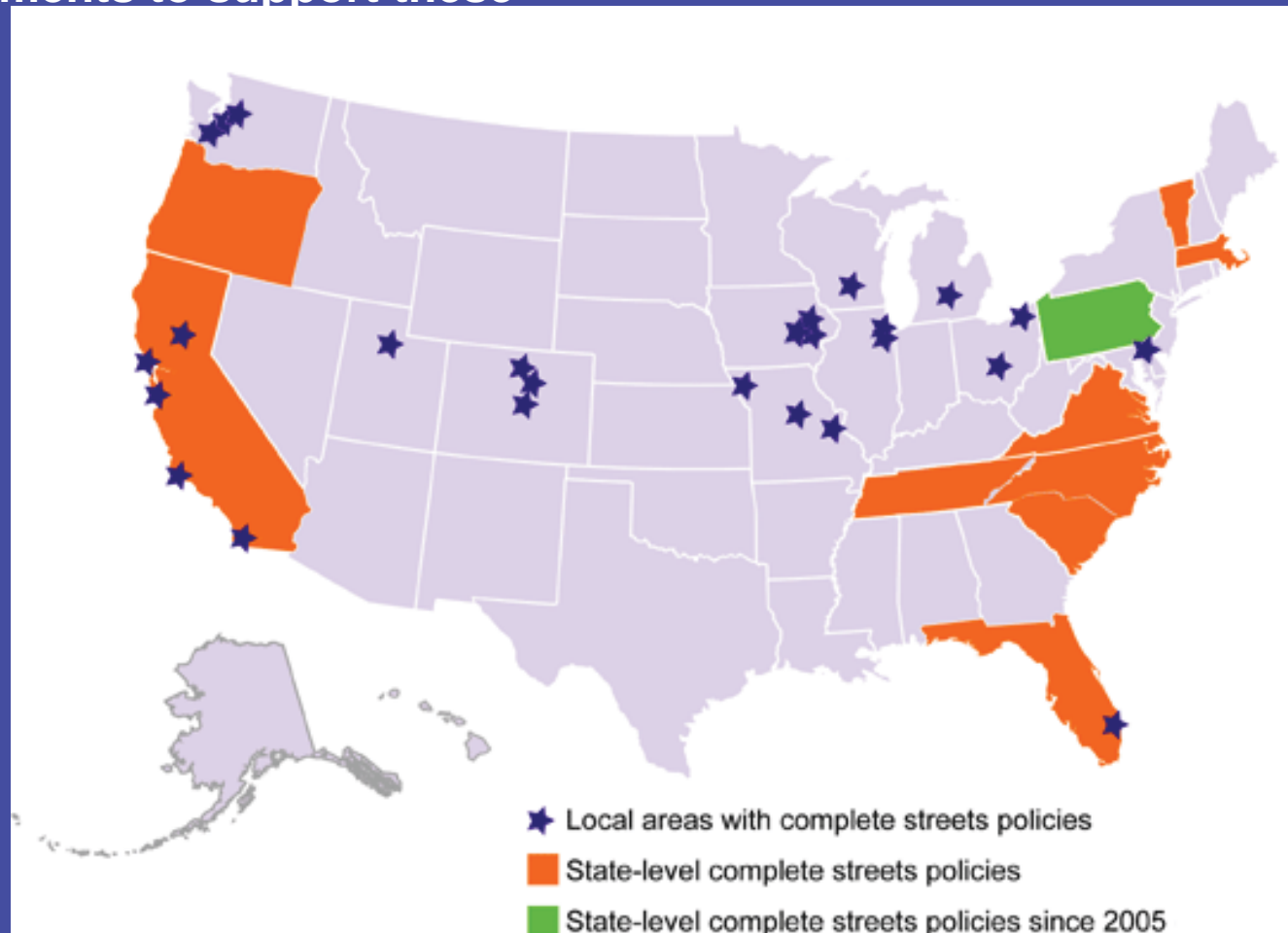


Source: Center for
Transportation
Excellence

Almost 70% of State & Local Transportation Measures Approved

Safe Routes to School

Over 18000 schools now have a Safe Routes to School program. 43 states are making investments to support these programs.



Source: Thunderbird Alliance

What's Next?

Framing and Messaging:



- Economy
- Jobs
- Cost Savings
- Market Opportunity
- Safety

Organizing

RUSTWIRE.COM

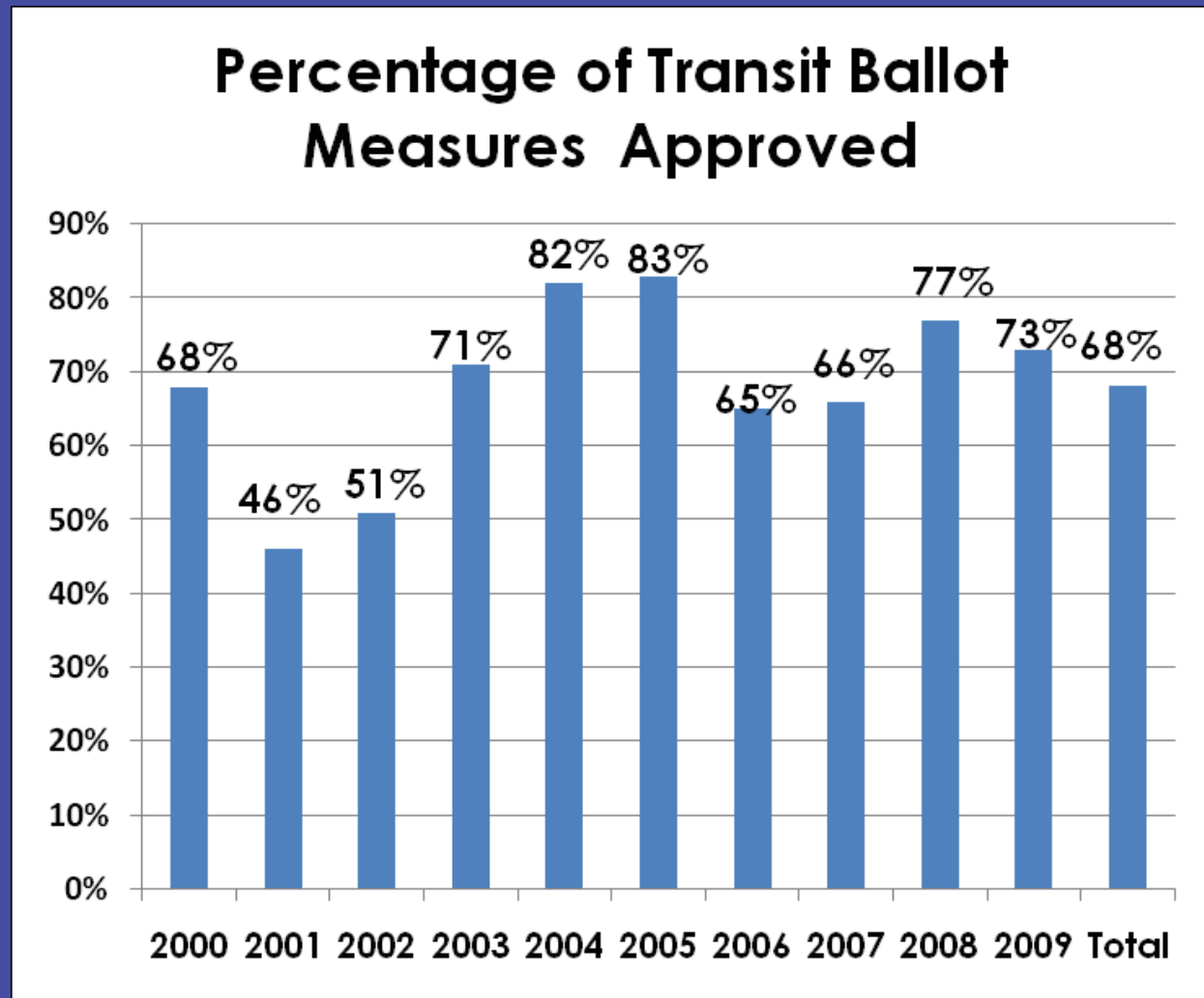
Michigan CEO: Soul-Crushing Sprawl Killing Business

March 11, 2011

“The fundamental problem it seems to me is that our region as gone berserk on suburbia at the expense of having any type of nearby open space or viable urban communities, which are the two primary spatial assets that attract and retain the best human capital.”

Targeted Campaigns

- Almost a 70% approval rate for transportation measures (twice the rate of all ballot measures)
- Success across region, population, party affiliation
- But it takes a sustained and dogged public education effort to get to yes



** Courtesy of Center for Transportation Excellence*



Transportation
For America

TRANSPORTATION *for* AMERICA

**Executive
Committee**

- **Reconnecting America** (co-chair)
- **Smart Growth America** (co-chair)
- Action! For Regional Equity
- America Bikes
- American Public Health Association (APHA)
- Apollo Alliance
- LOCUS: Responsible Real Estate Developers and Investors
- National Association of City Transportation Officials (NACTO)
- National Association of Realtors
- National Housing Conference
- Natural Resources Defense Council
- PolicyLink
- Surface Transportation Policy Partnership (STPP)
- Transit for Livable Communities (TLC)
- US PIRG

Electing Officials

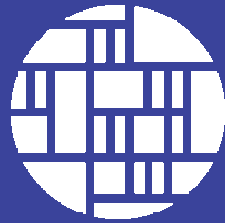
- Pro-Walk, Pro-Smart
Growth Officials



Main Street USA, Disneyworld



Burlington, Vermont



Smart Growth America

Making Neighborhoods Great Together

Smart Growth America is the only national organization dedicated to researching, advocating for and leading coalitions to bring smart growth practices to more communities nationwide.

www.smartgrowthamerica.org

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