Smart Growth America

Making Neighborhoods Great Together

Sea Grant Hawaii Smart Growth Workshop

November 2012

What is smart growth?

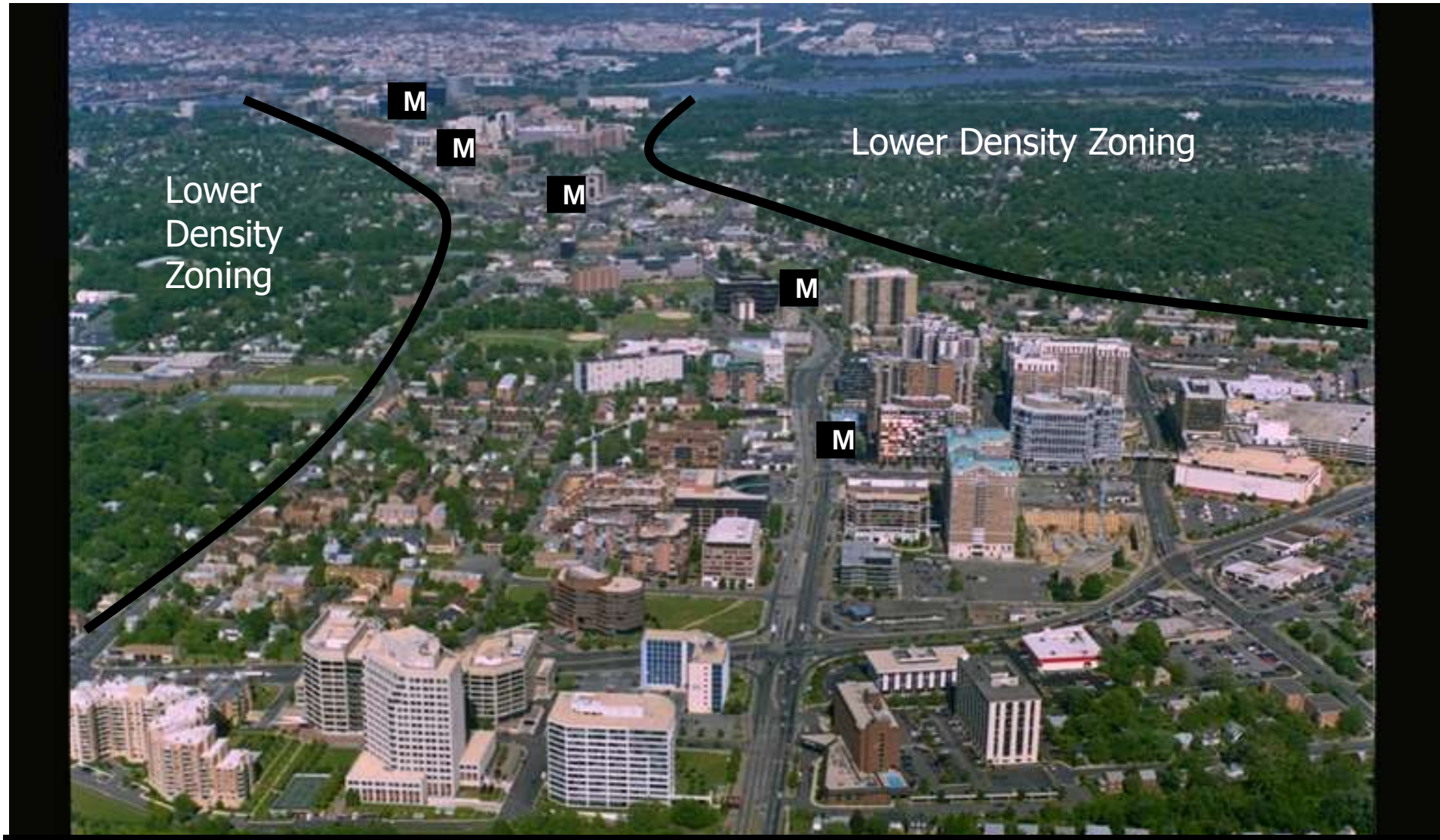
Smart growth is development that revitalizes neighborhoods, protects farmland and open space, keeps housing affordable, and provides more transportation choices.

It is development that is good for the economy, community, and the environment.

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

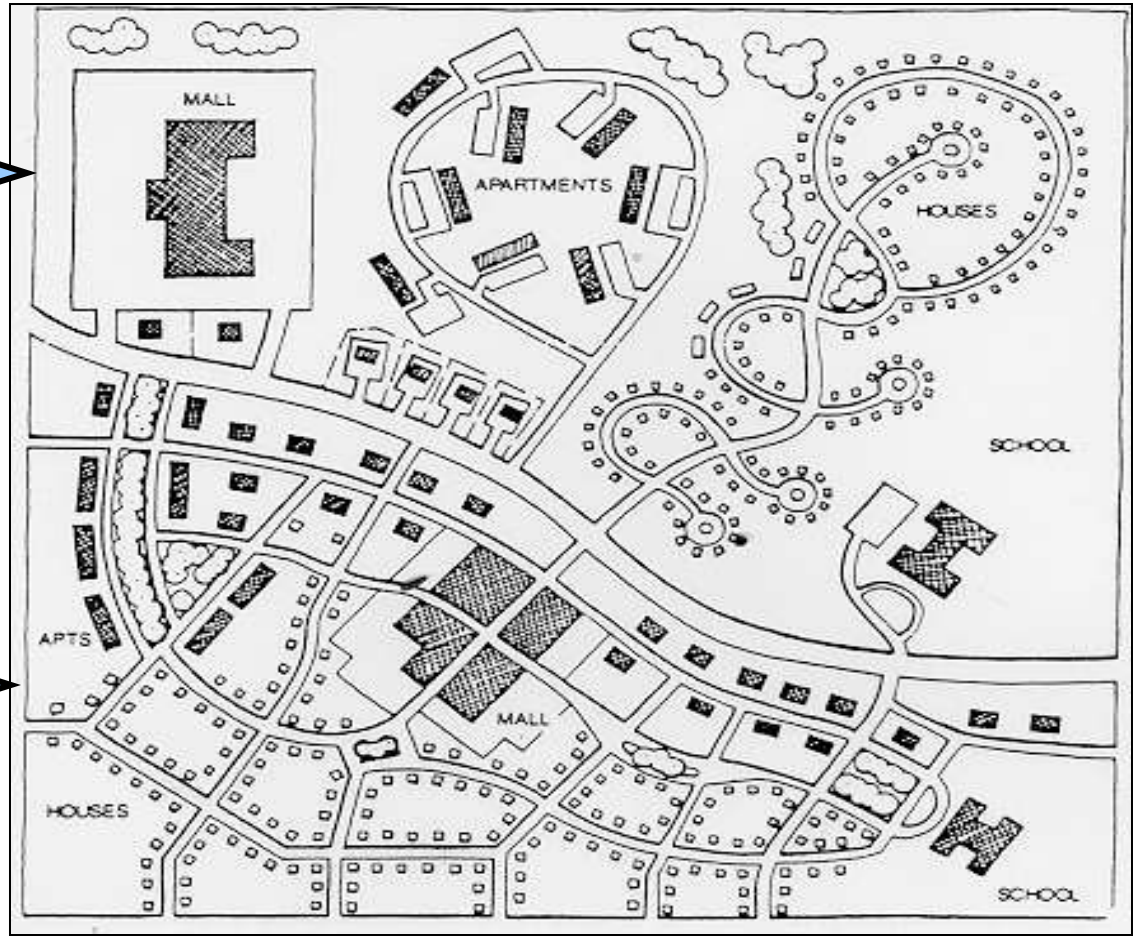


Smart growth encourages development around transit stations

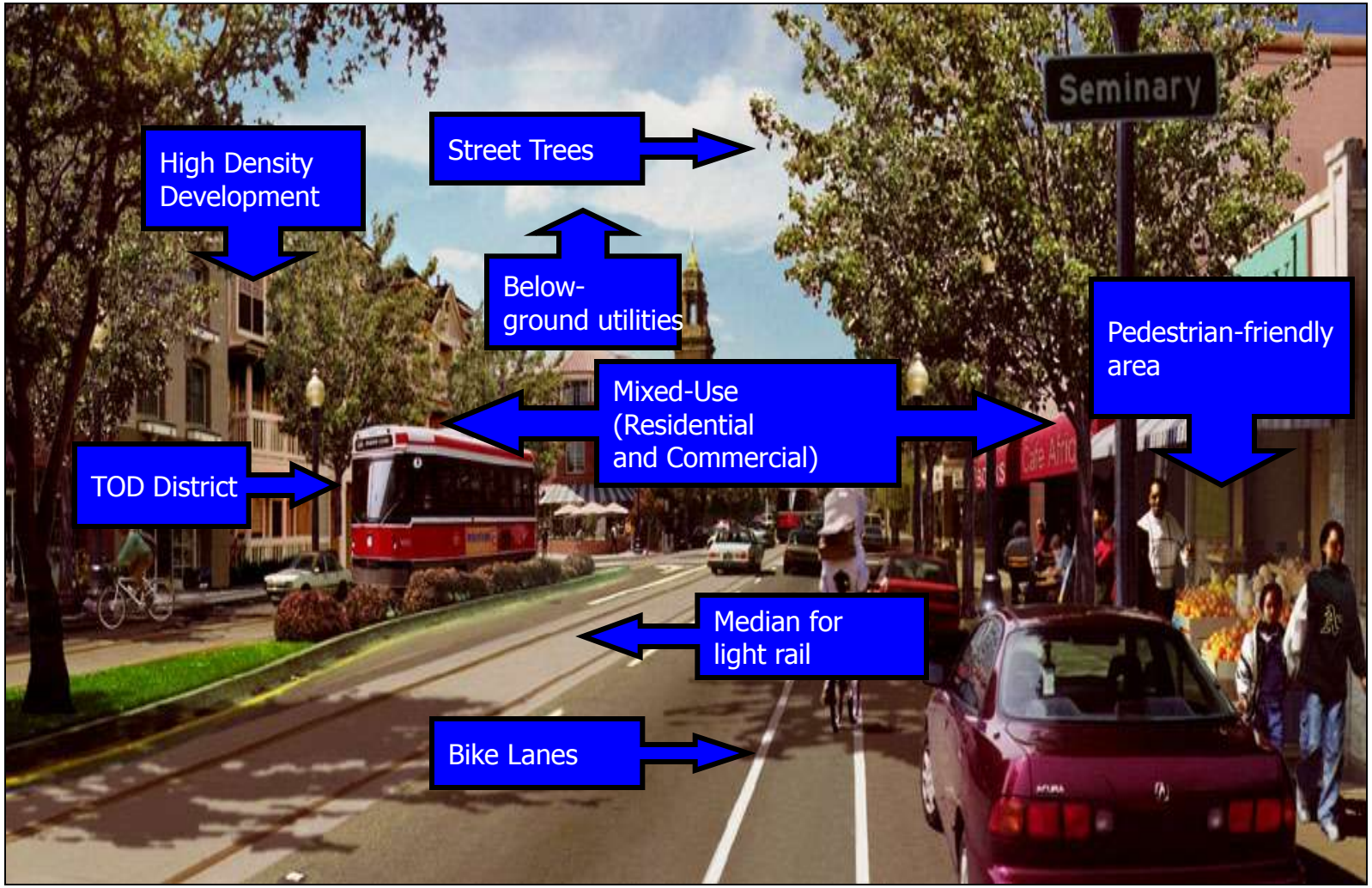
Neighborhood Level

Conventional

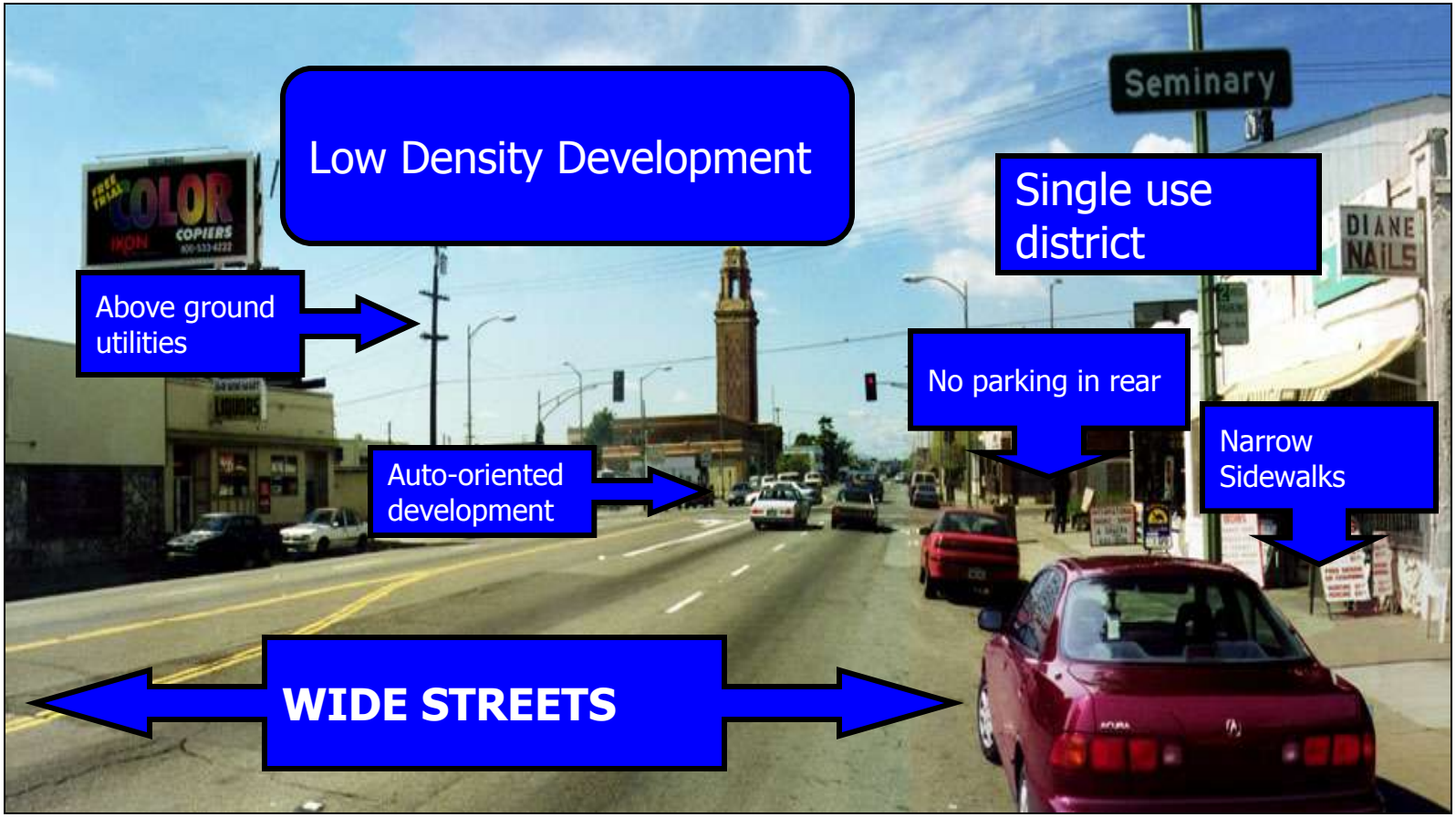
Smart Growth



Street level



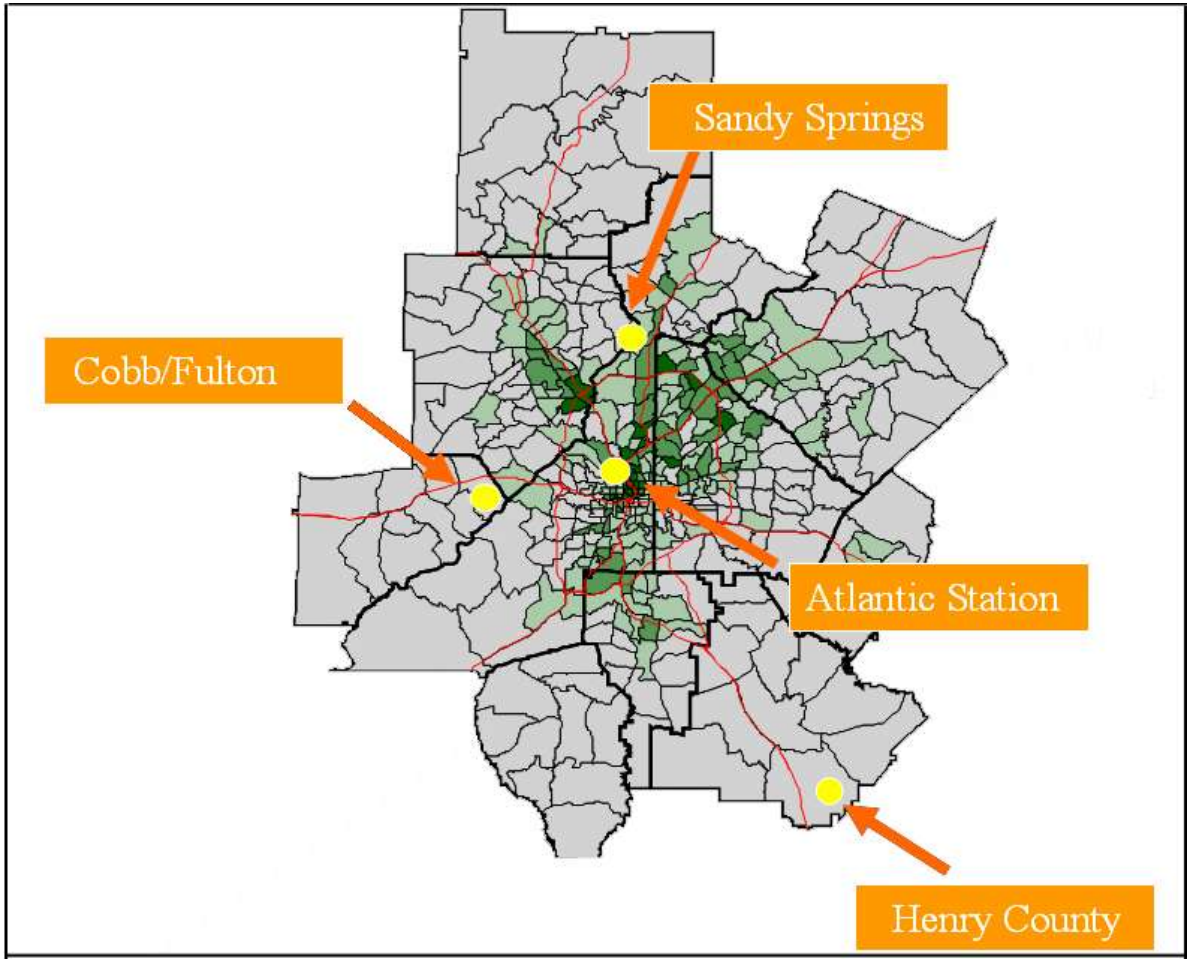
Existing Conditions



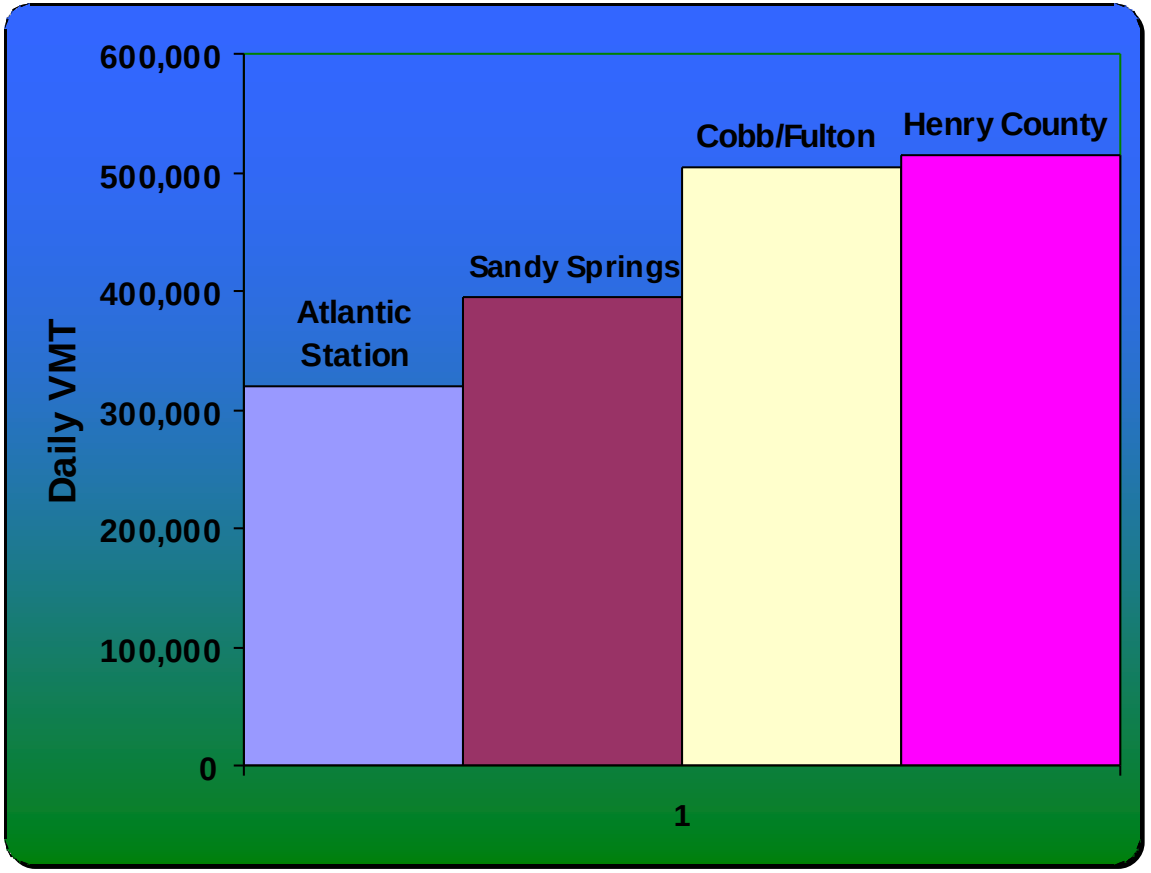
Atlantic Station Outcomes

- $4 Billion Project
- New Amenities in Midtown
- Tax Base
- Jobs
- Condo Tower Sold Out in 36 Hours

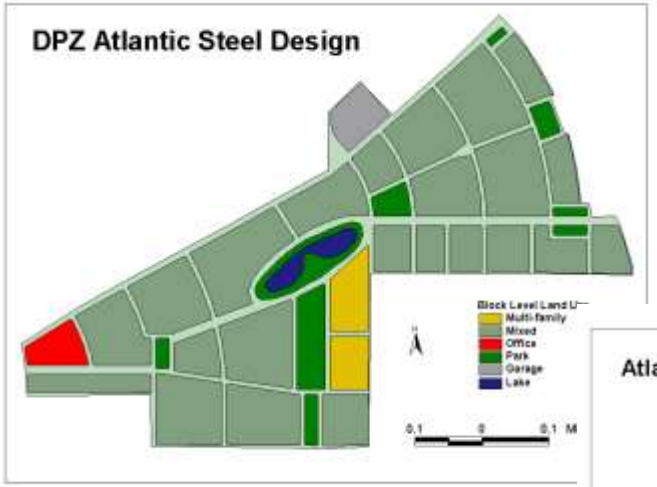
Atlantic Station vs. Henry County

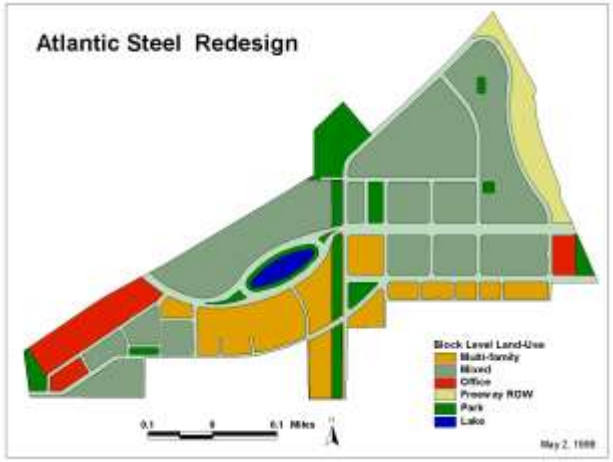


1/3 Savings Due to Regional Accessibility

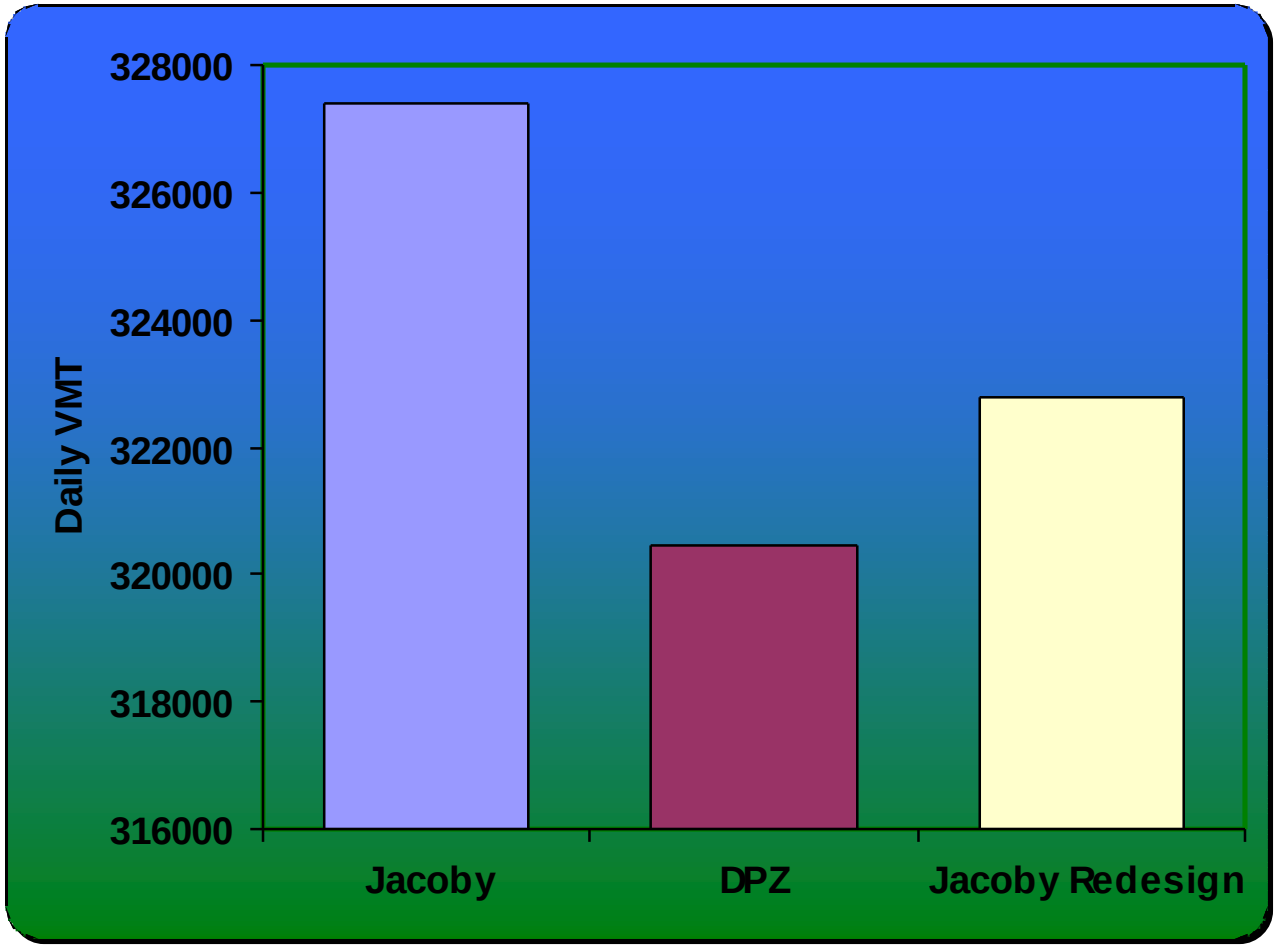


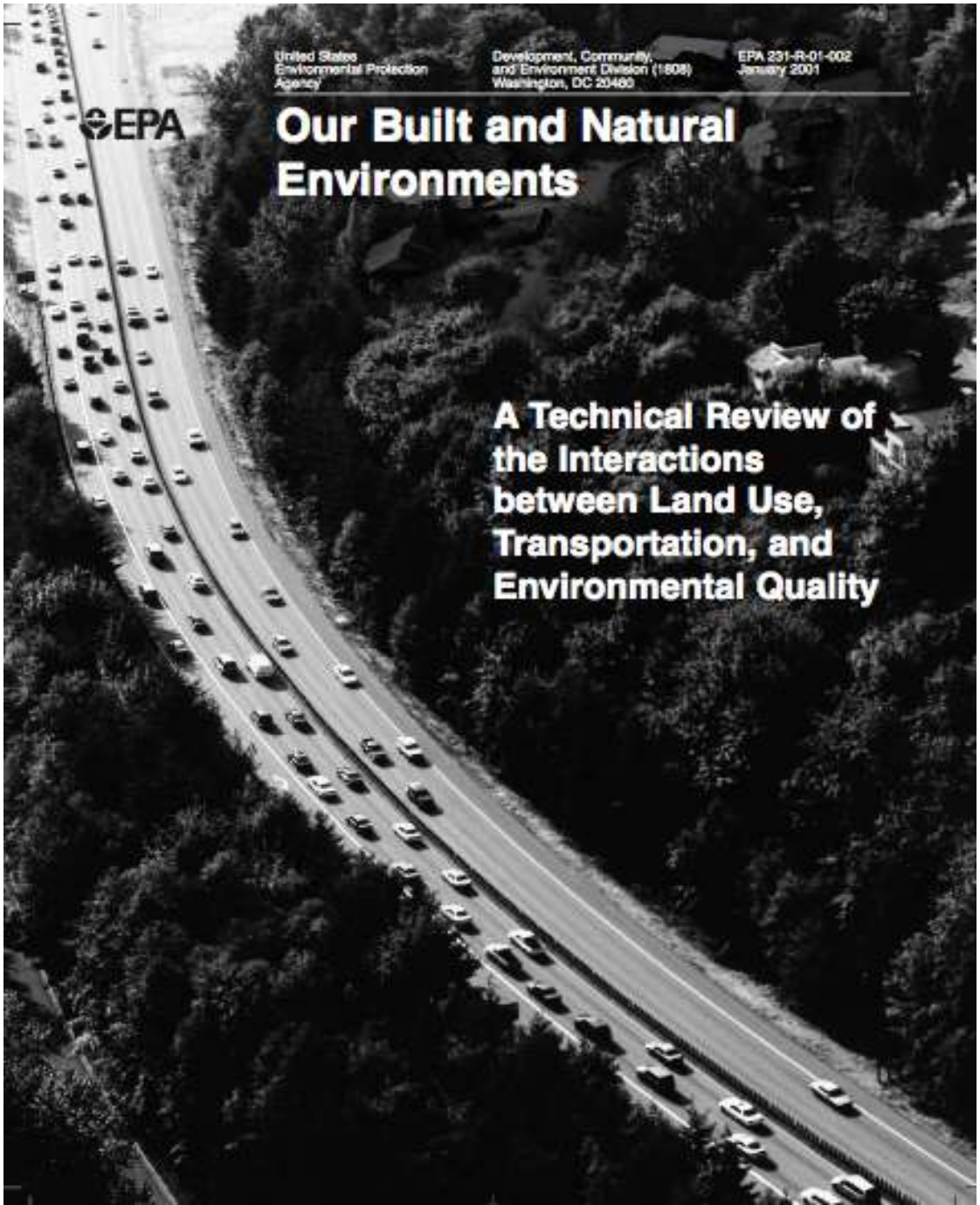
Alternative Site Plan Comparison



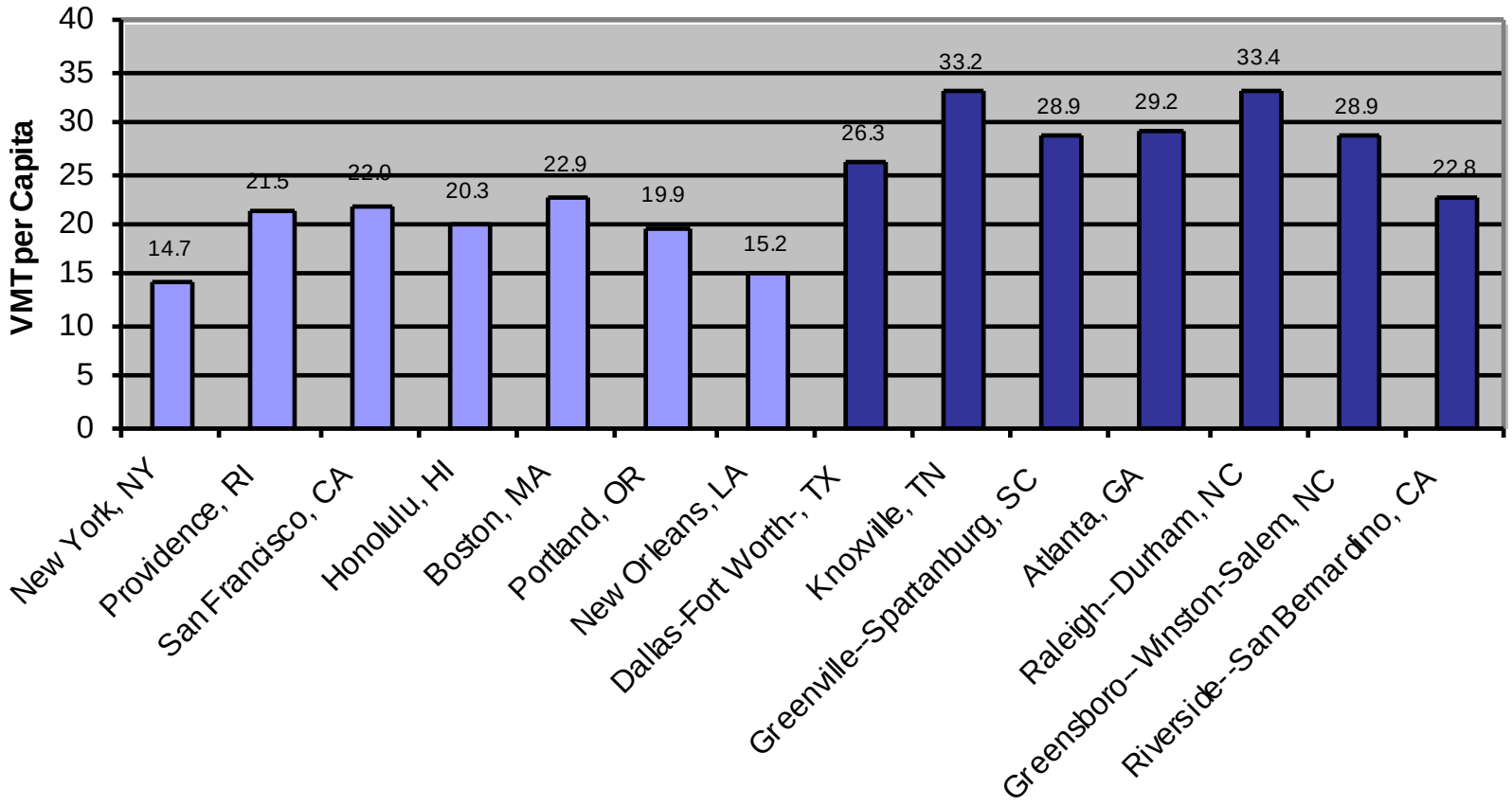


5% Savings Due to Site Design

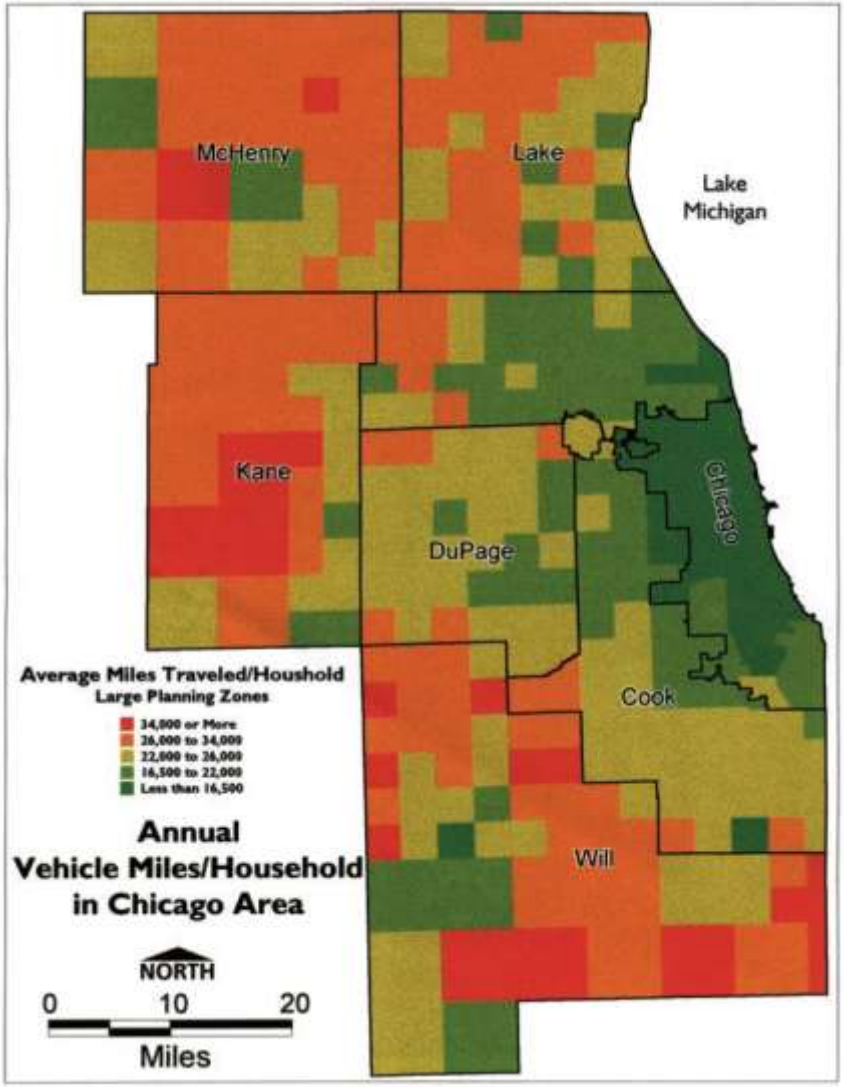



United States
Environmental Protection
Agency
Development, Community,
and Environment Division (1808)
Washington, DC 20460
EPA 231-R-01-002
January 2001
EPA
Our Built and Natural Environments
A Technical Review of the Interactions between Land Use, Transportation, and Environmental Quality

35% Less VMT with Compact Development

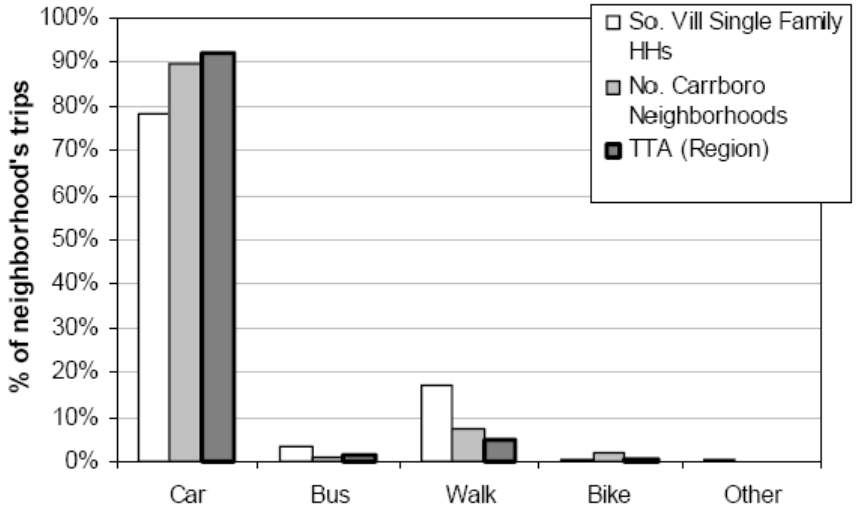


Disaggregate Travel Studies

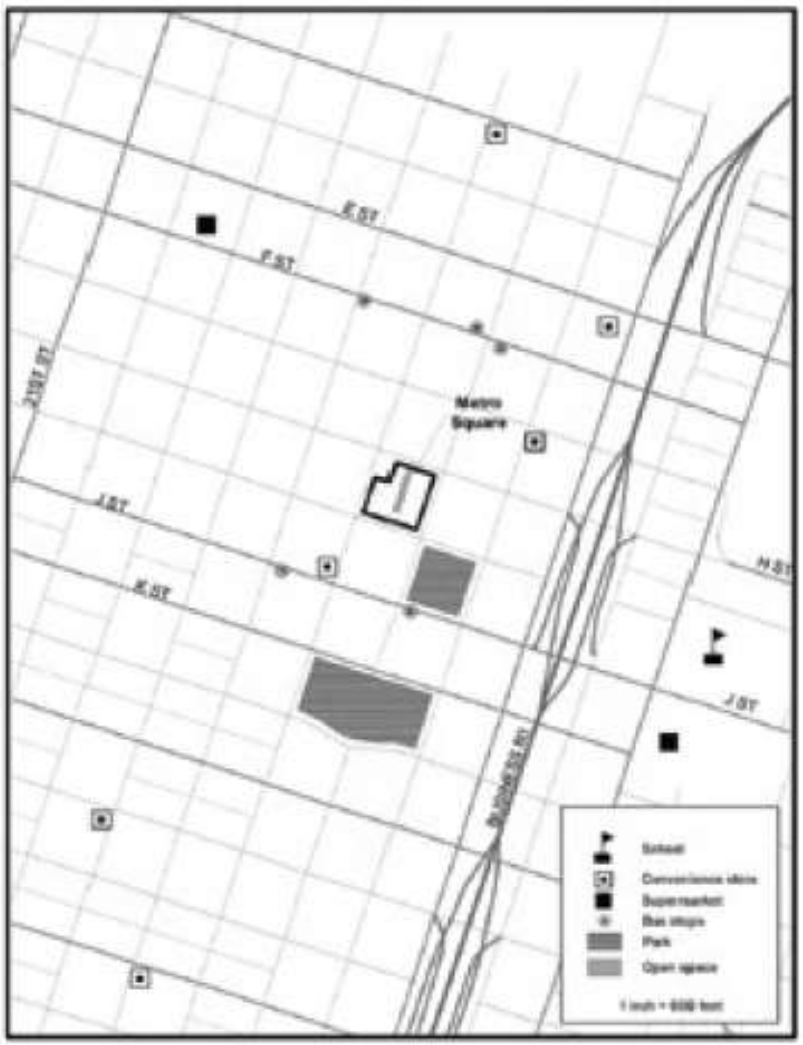


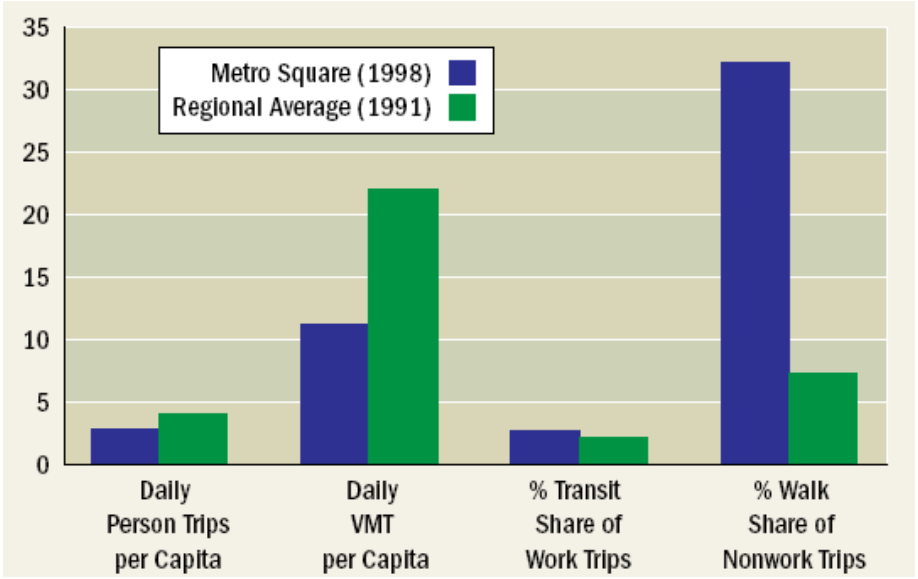
Regional Simulations

Southern Village (40% lower)



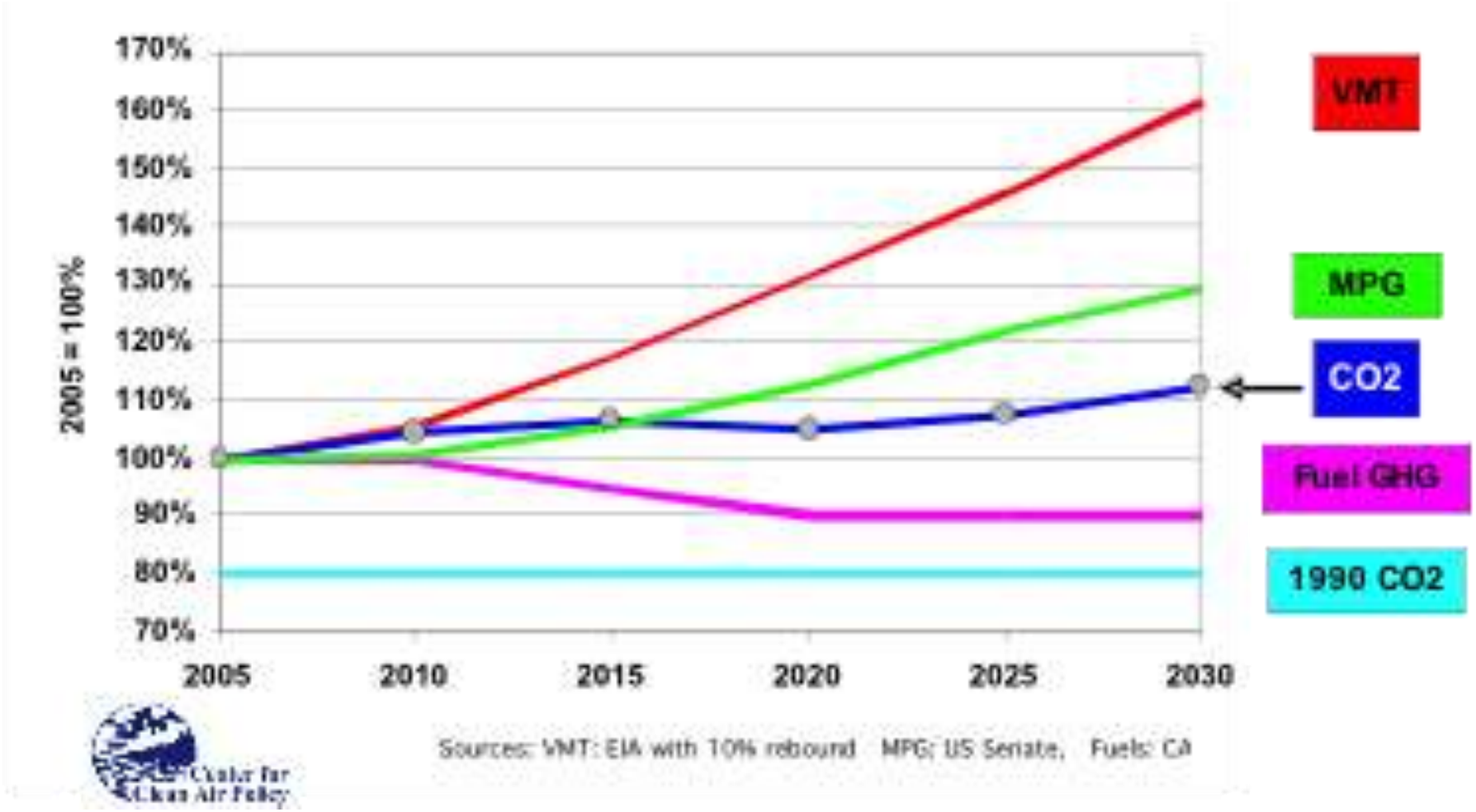
Metro Square (50% lower)

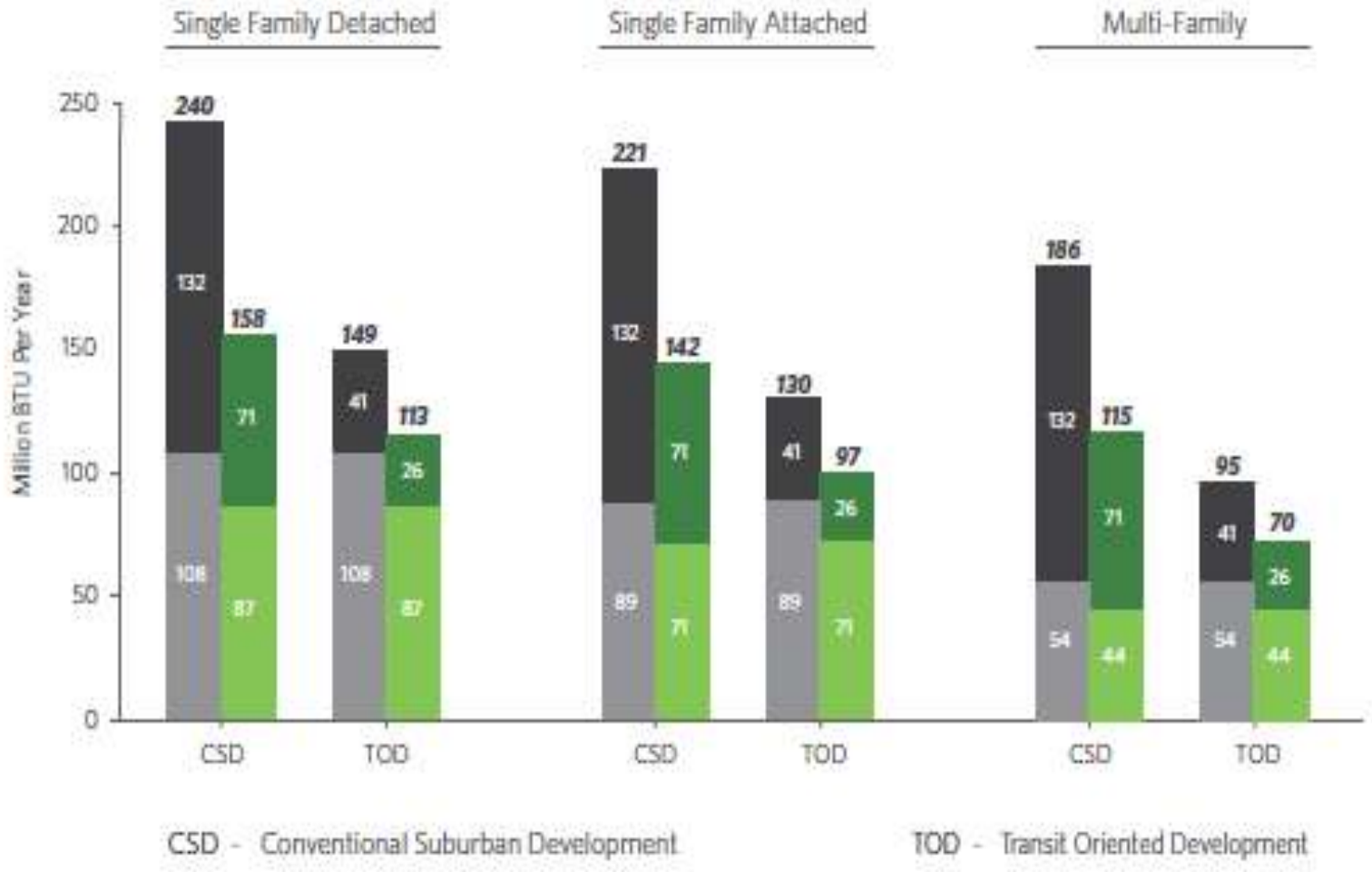




NATURAL RESOURCES DEFENSE COUNCIL

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





CSD - Conventional Suburban Development

TOD - Transit Oriented Development

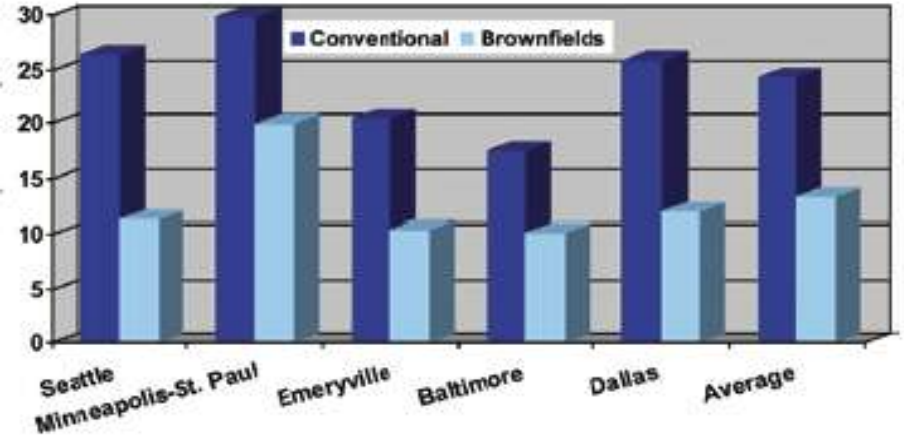
© Jonathan Rose Companies LLC, with support from USEPA, Revised March 2011

Prepared by:

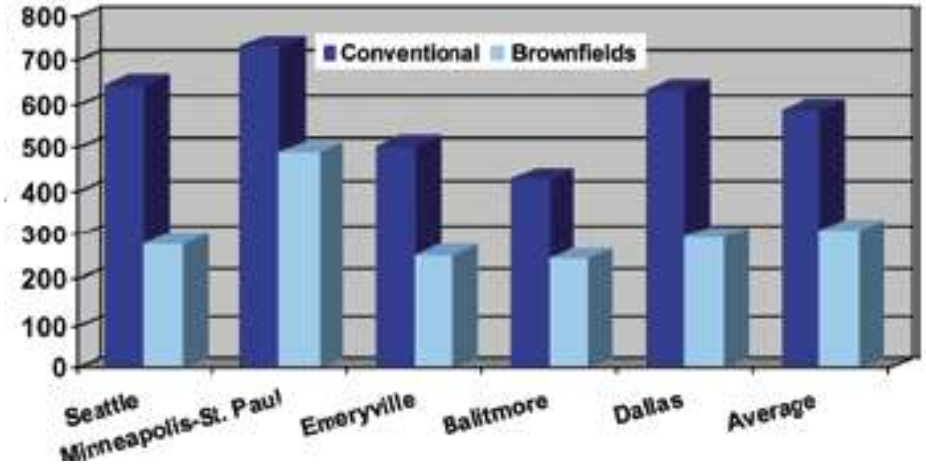
Jonathan Rose Companies
Revised March 2011

Brownfields

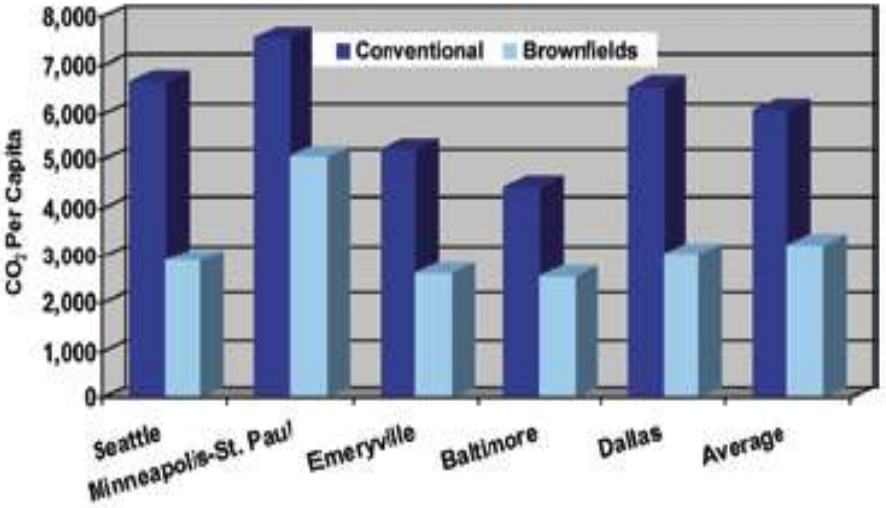
Vehicle Miles Traveled
(Miles Per Capita Per Day)



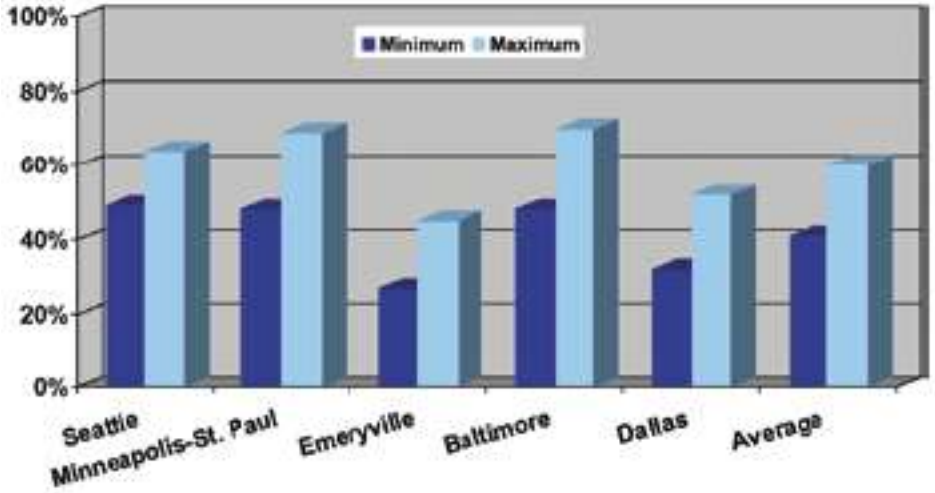
Air Pollutant Emissions
(NOx, CO, HC; Pounds Per Capita Per Year)



Carbon Dioxide Emissions
(Pounds Per Capita Per Year)



Stormwater Runoff
(Percent Reduction for Brownfields)



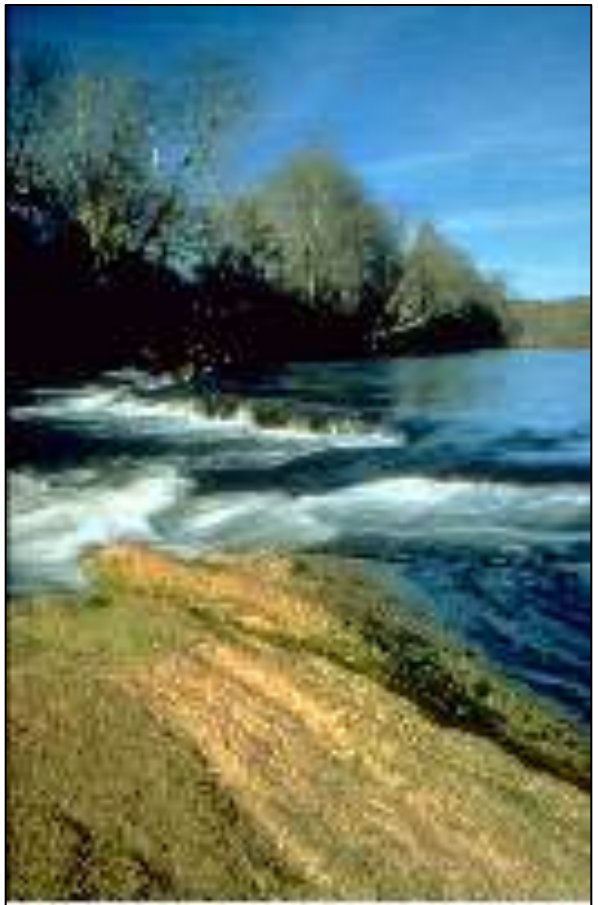
Air Pollution

- Built environment → travel behavior and per capita air pollution → pollution exposure in a population

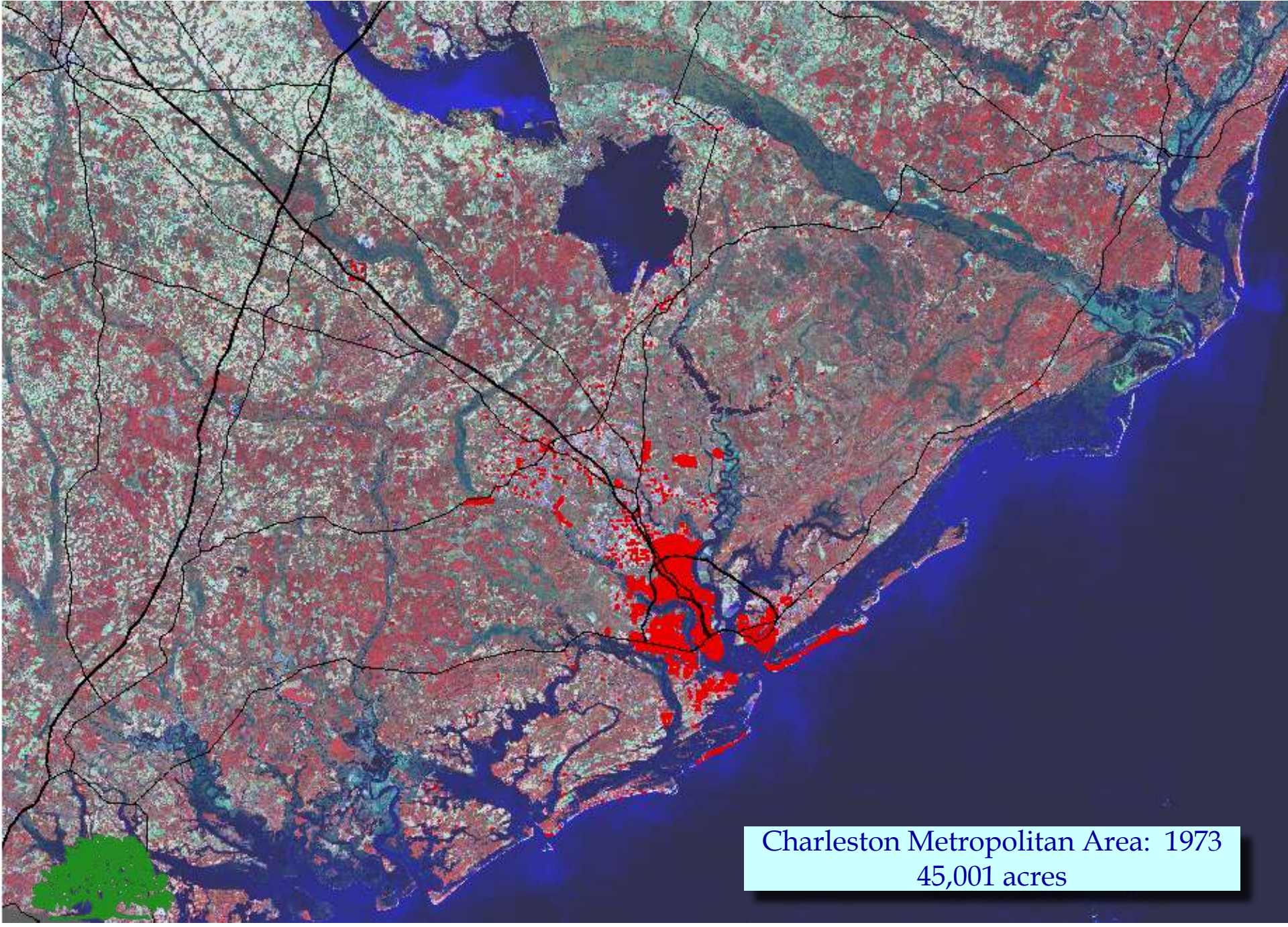
- King County (Seattle): 25% increase in walkability associated with 6.5% fewer VMTs, 5.6% fewer grams of Nox and 5.5% fewer grams of VOC per capita

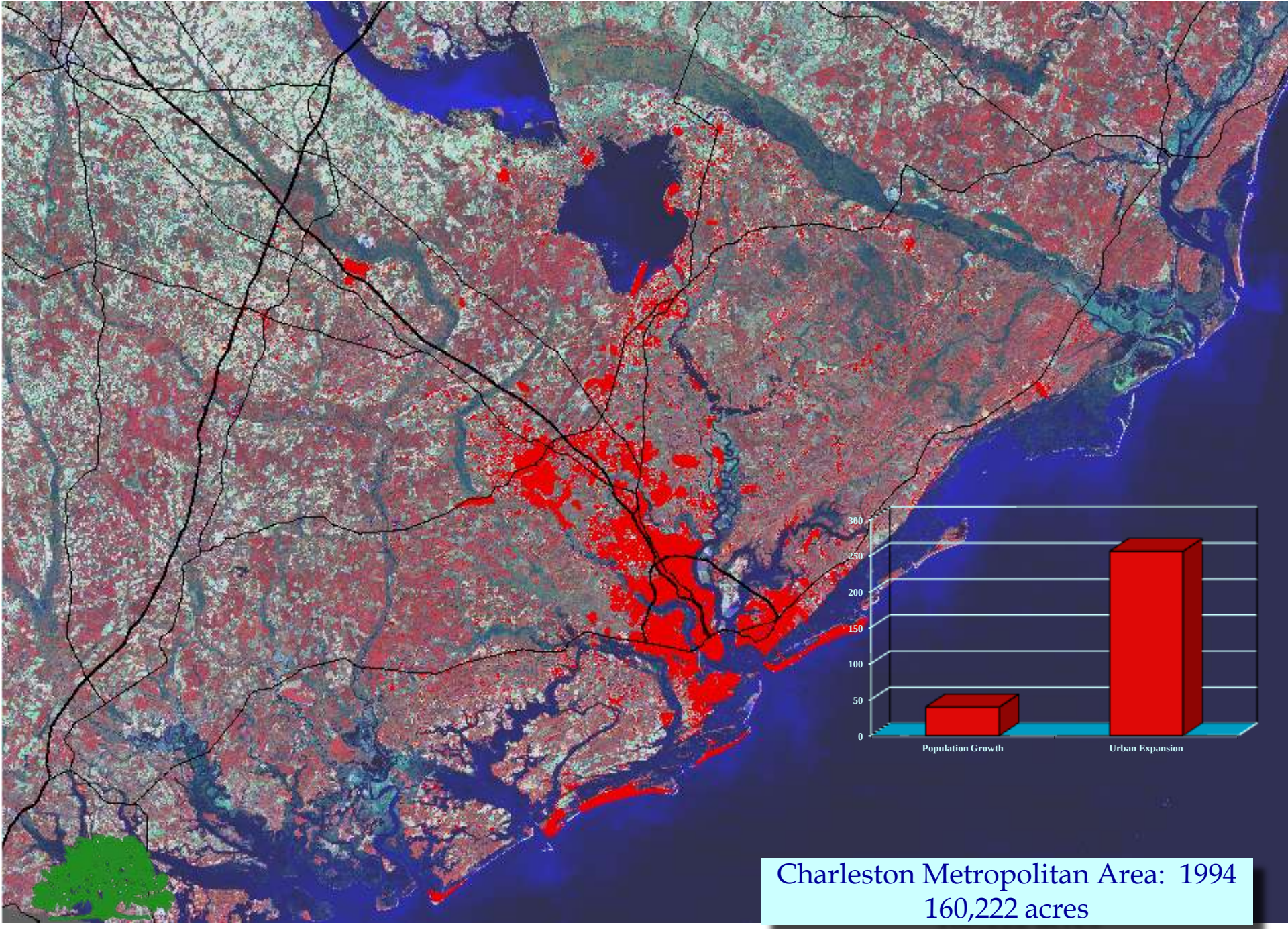
Water Impact of Development

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

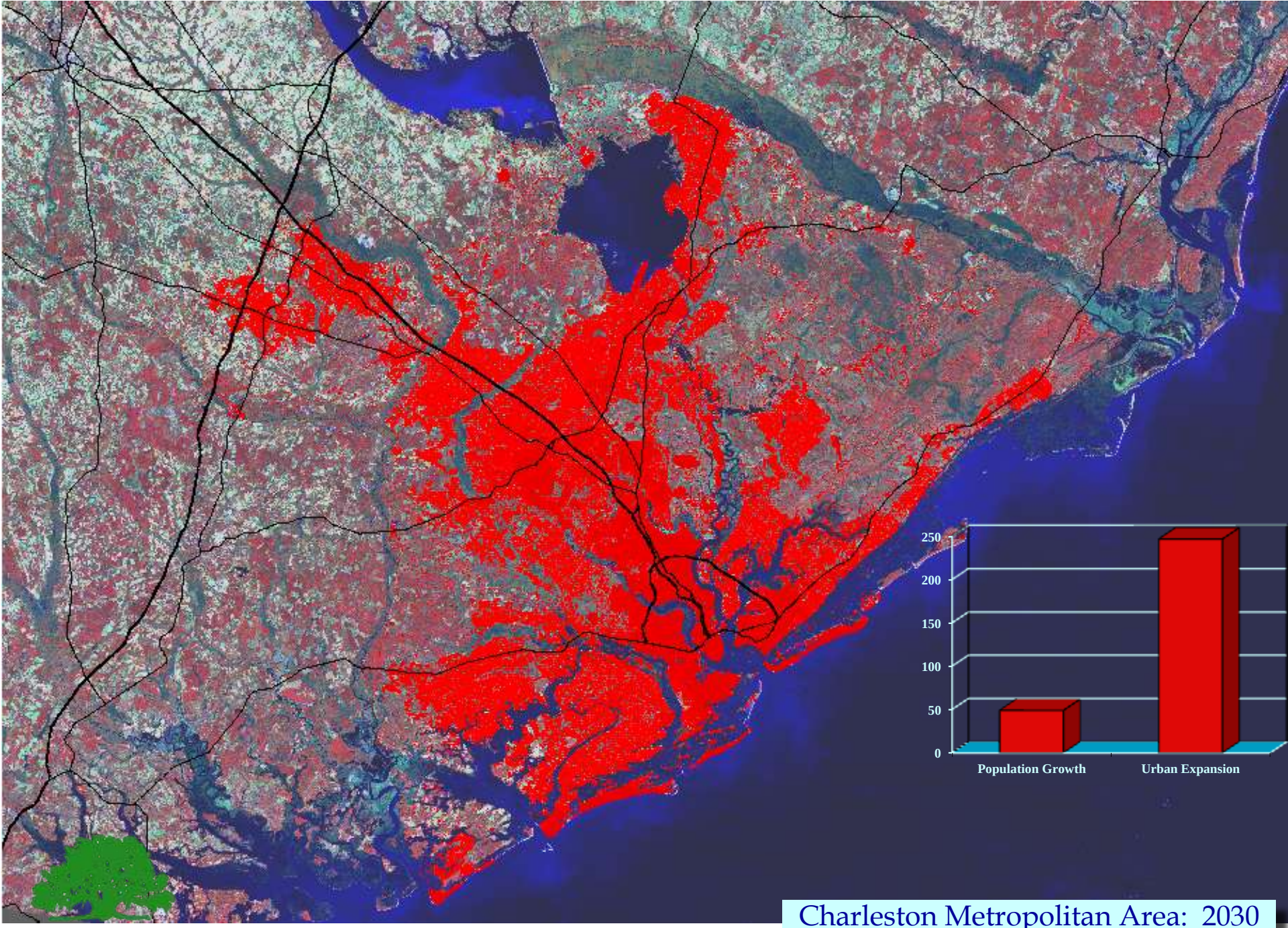


Chattahoochee River, GA


Charleston Metropolitan Area: 1973
45,001 acres

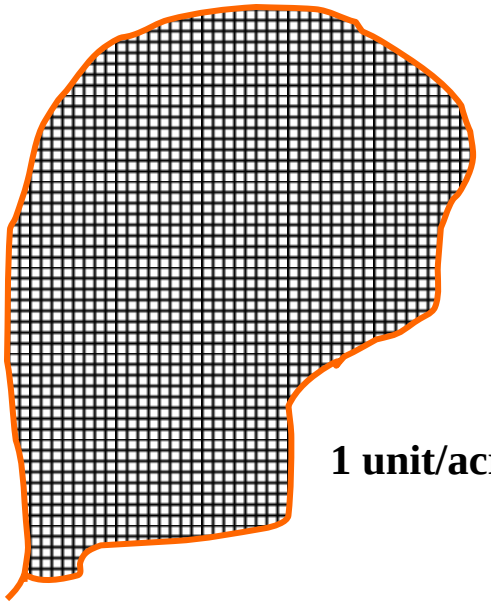


Charleston Metropolitan Area: 1994
160,222 acres

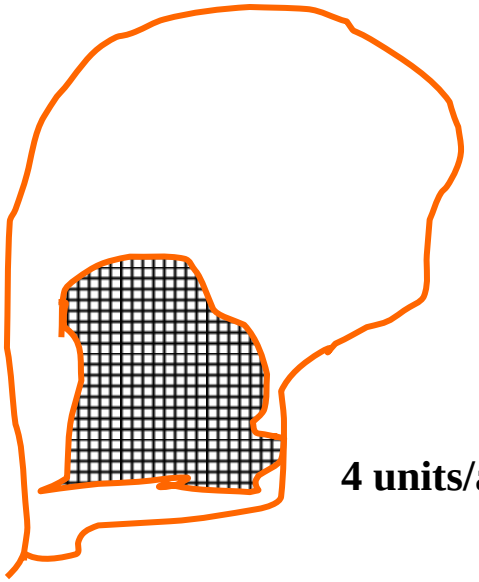


Charleston Metropolitan Area: 2030
555,520 acres

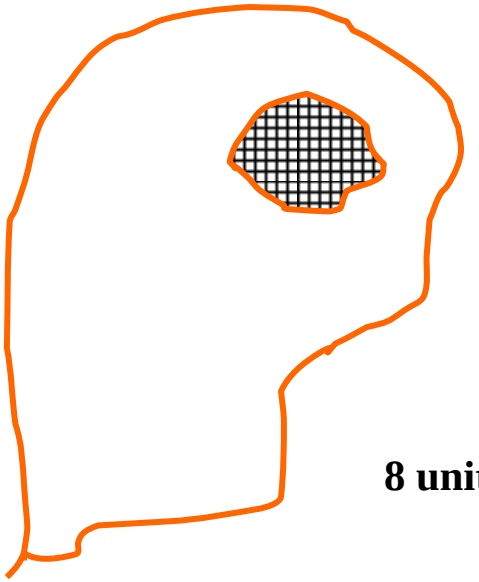
EPA Research on SG and Water



1 unit/acre



4 units/acre



8 units/acre

10,000 houses on 10,000 acres produce 187 million ft^3 /yr stormwater runoff

Site: 20% impervious
Watershed: 20% impervious

10,000 houses on 2,500 acres produce 62 million ft^3 /yr stormwater runoff

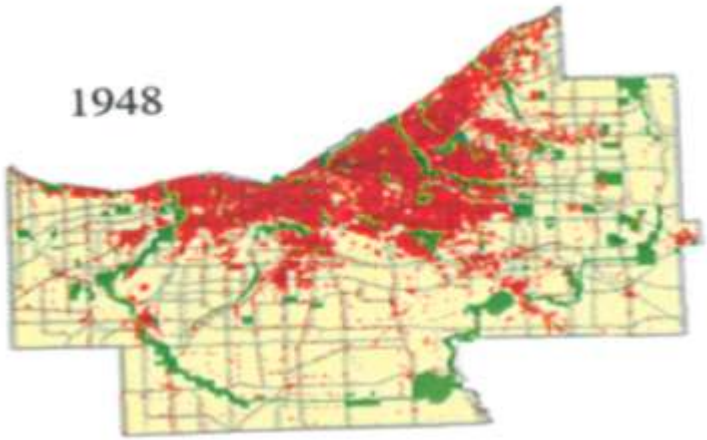
Site: 38% impervious
Watershed: 9.5% impervious

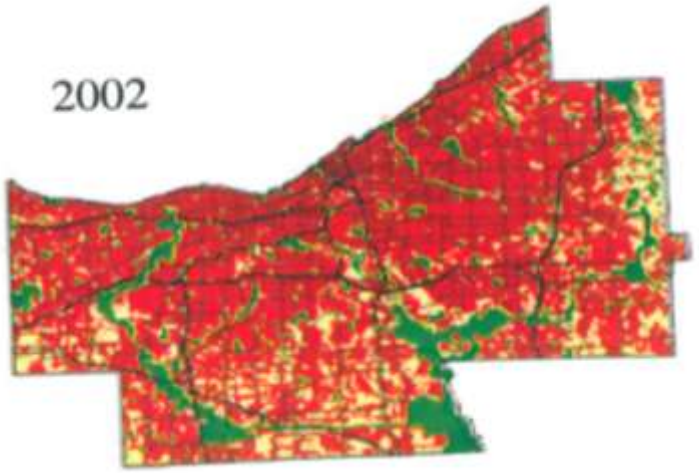
10,000 houses on 1,250 acres produce 49.5 million ft^3 /yr stormwater runoff

Site: : 65% impervious
Watershed: 8.1% impervious

The lower density scenario creates more run-off and consumes 2/3 more land that the higher density scenario.

Cleveland: Same Population





1950: 1,389,582 **2002: 1,393,978**

Source: TTI	1982	2007
% peak VMT congested	10	28
% of land miles w/ congestion	10	23
Number of rush hours	3	5
Freeway and arterial miles	2420	4490

Cuyahoga Co Land Use Maps – Cuyahoga Co Planning Commission

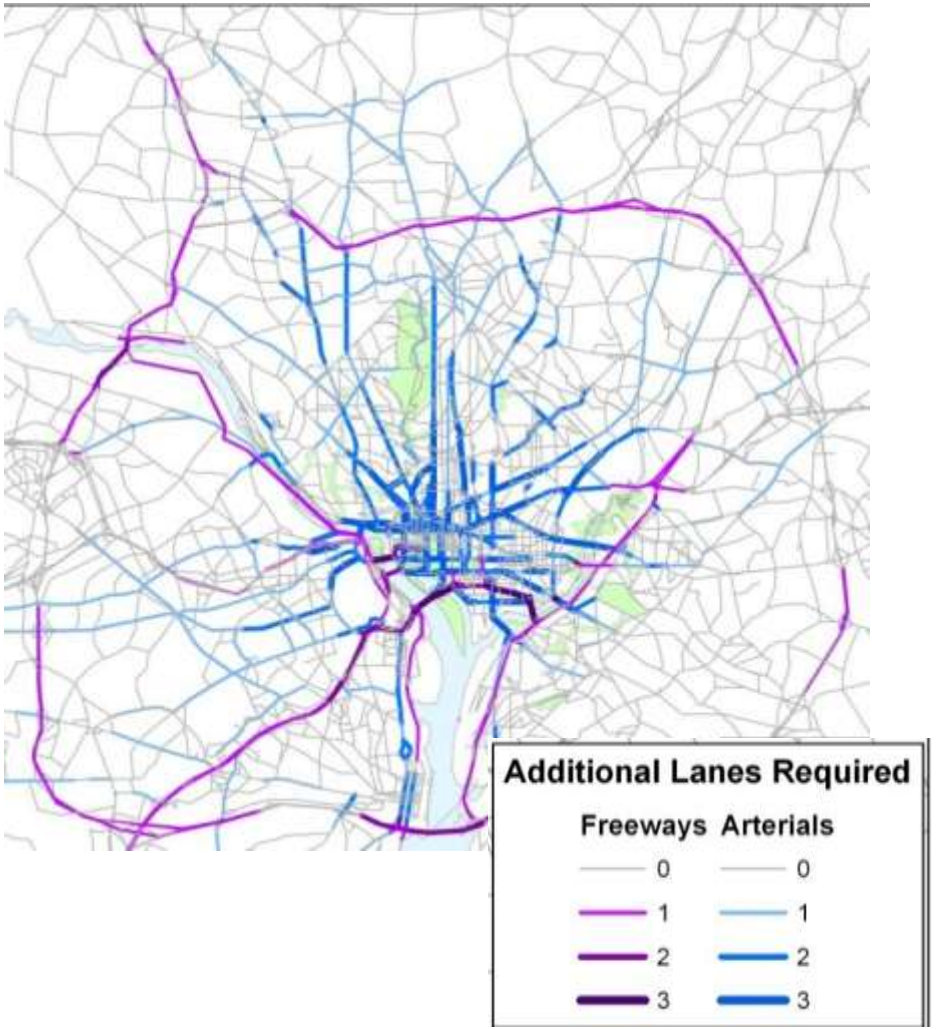
Without Transit

+ 1 million auto trips/day

+ 1,000 lane-miles needed to keep existing levels of congestion

=

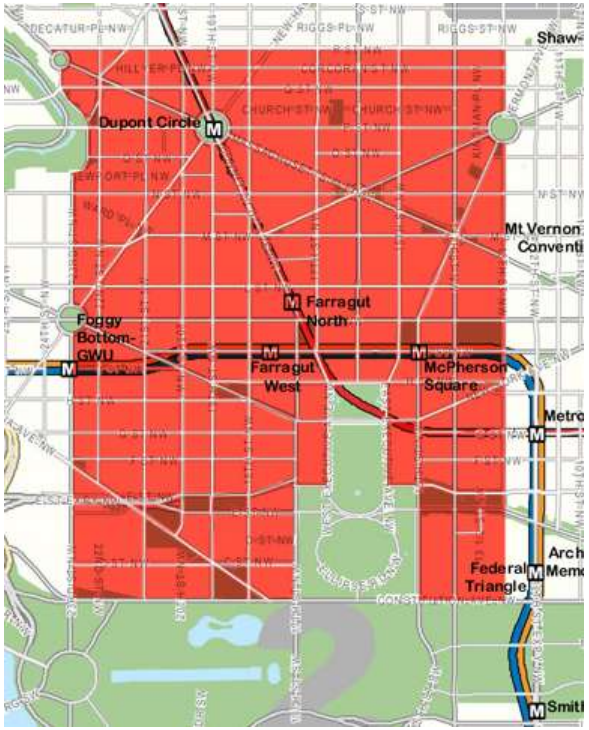
- Add 11 lanes to the entire Capital Beltway
- 4-6 new lanes on Potomac crossings
- ~ $4.7 billion



Without Transit

200,000 more parking spaces in core

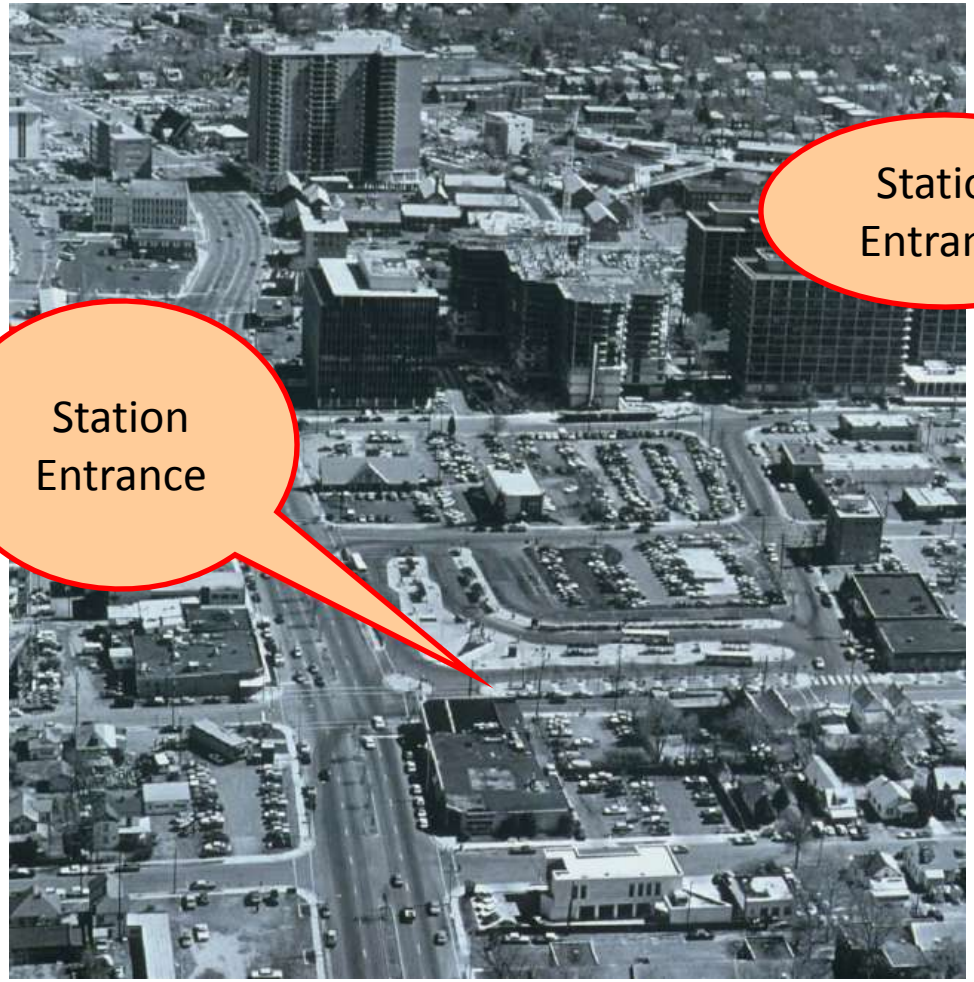
× 166 =



- Almost 170 blocks of 5-story parking garages
  - From 23rd to 12th
  - Constitution Avenue to R Street

Adding Development in Already Developed Places

Ballston 1980



Ballston 2001

Case study: Arlington County, VA

Between 1970 and 2000, Arlington County added 15 million square feet of office and 15,000 units of housing on two square miles along its Metro rail corridor.

These investments now generate **33% of the county's real estate tax revenue** - on just 7.6% of its land.

Arlington residents make 58,000 trips each day on Metro, with 47% of residents along the corridor using transit to get to work.

Average daily car traffic along the corridor has fallen, down from 19,785 cars per day in 1990 to 18,873 in 2000.

Steps to Revitalizing Columbia Heights

- Metro introduced in 3 new stations 1990s ($500M+)
- Transit linked neighborhood to downtown, suburbs
- District provided $48M subsidy for anchor shopping center
- Subsidized land sales to pay for affordable housing
- Invested over $62M to preserve and create affordable housing and community facilities
- Now more than $1 billion in investment within a mile of the site
  - 81 projects
  - 4,000 units of housing
  - 800,000 sq ft retail

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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