

Planning for Healthy Communities:

Improving the Health and Happiness of Your Community Through
Roadway Design and Community Planning

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Presentation Outline

1. Background on Community Design
2. Typical Streetscape Design
3. Obesity Trends Data
4. Elements of Healthy Community Design
5. Policies and Implementation Tools
6. Resources

Community Design and Health



City Edge



Suburban Neighborhoods

- Typical cul-de-sac design
- Low Connectivity





School Siting: A Generation Ago

- Small (average of 127 students)
- Located in community centers
- 42% of kids walked or biked to school



(EPA, 2003; 1969 Nationwide Personal Transportation Survey)

School Siting: Now

- 40% of high schools have attendance of 1500+ students
- Schools located on 10 to 30+ acres of land
- Located in areas that make walking or biking to school difficult



Fewer kids are biking and walking. More parents are driving.

- 2001:
16% walked
- 1969:
42% walked

(CDC, 2005)



Drive Thru Culture

- Pharmacies
- Dry Cleaners
- Grocery Stores
- Liquor Stores
- Bakeries
- Restaurants
- Coffee
- Auto Services
- Banking
- Post office
- Bill Pay



Transportation Consequences



Images:
http://commons.wikimedia.org/wiki/File:San_Jose_Freeway_Interchange.jpg
www.transportation.org
www.kypublictransit.org/Legislation.htm

Streets Designed for Automobiles





Uncomfortable Walking Conditions



Lack of Connectivity



Obstacles in the Sidewalk



Broken Sidewalks



Roads too Narrow to Share with Bikes



Poorly Designed Transit Stops

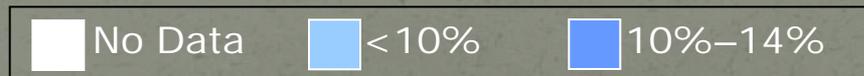
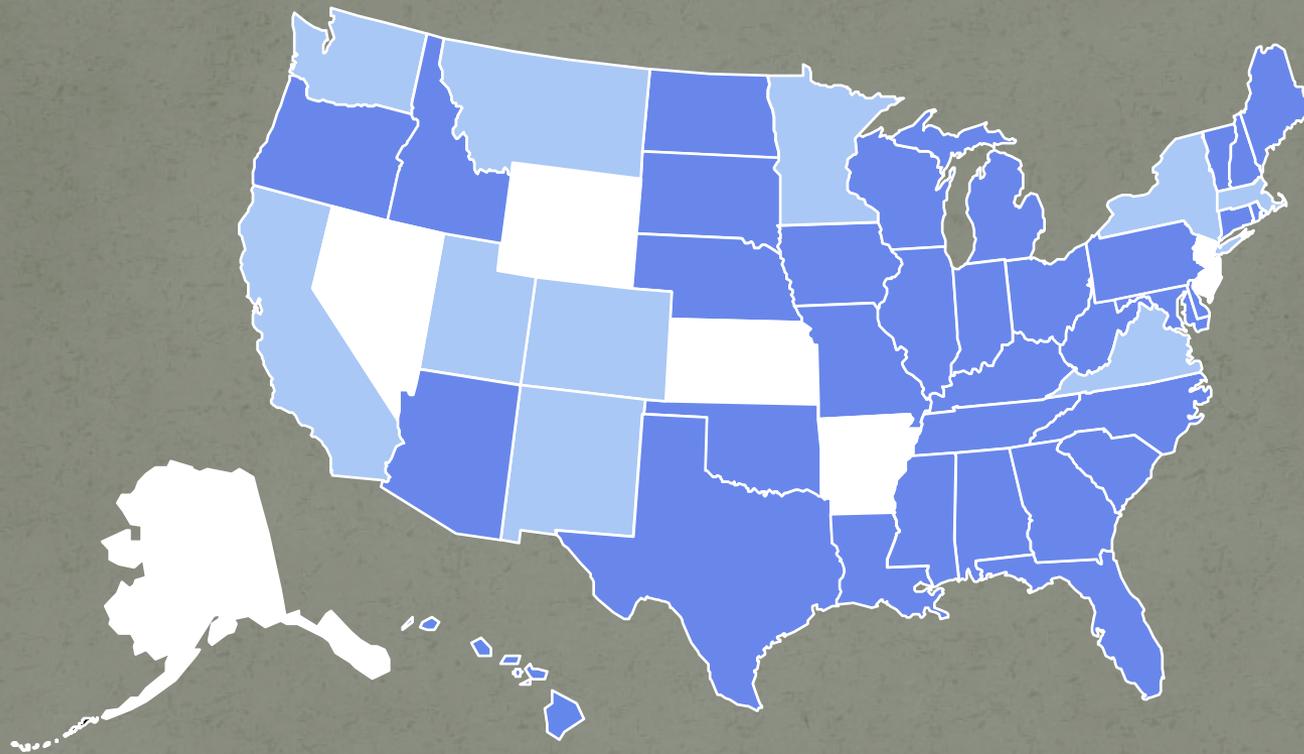
- No shelter
- No sidewalks
- No marked crossing



With current city and roadway design, we are creating an environment that discourages people from being physically active.

Obesity trends among U.S. adults: 1990

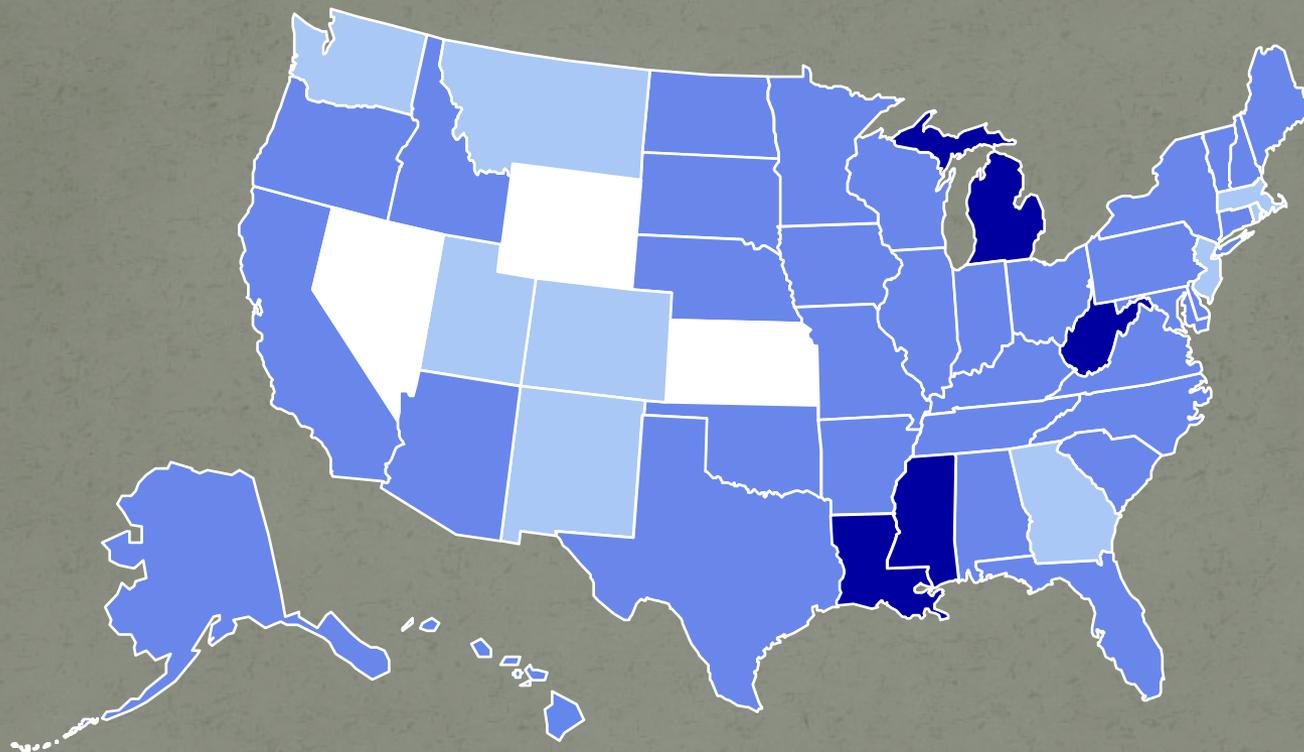
(*BMI ≥ 30 , or ~ 30 lbs overweight for 5' 4" woman)



(Behavioral Risk Factor Surveillance System, CDC, 2005)

Obesity trends among U.S. adults: 1991

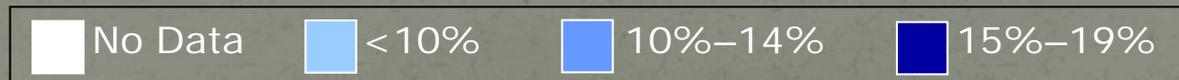
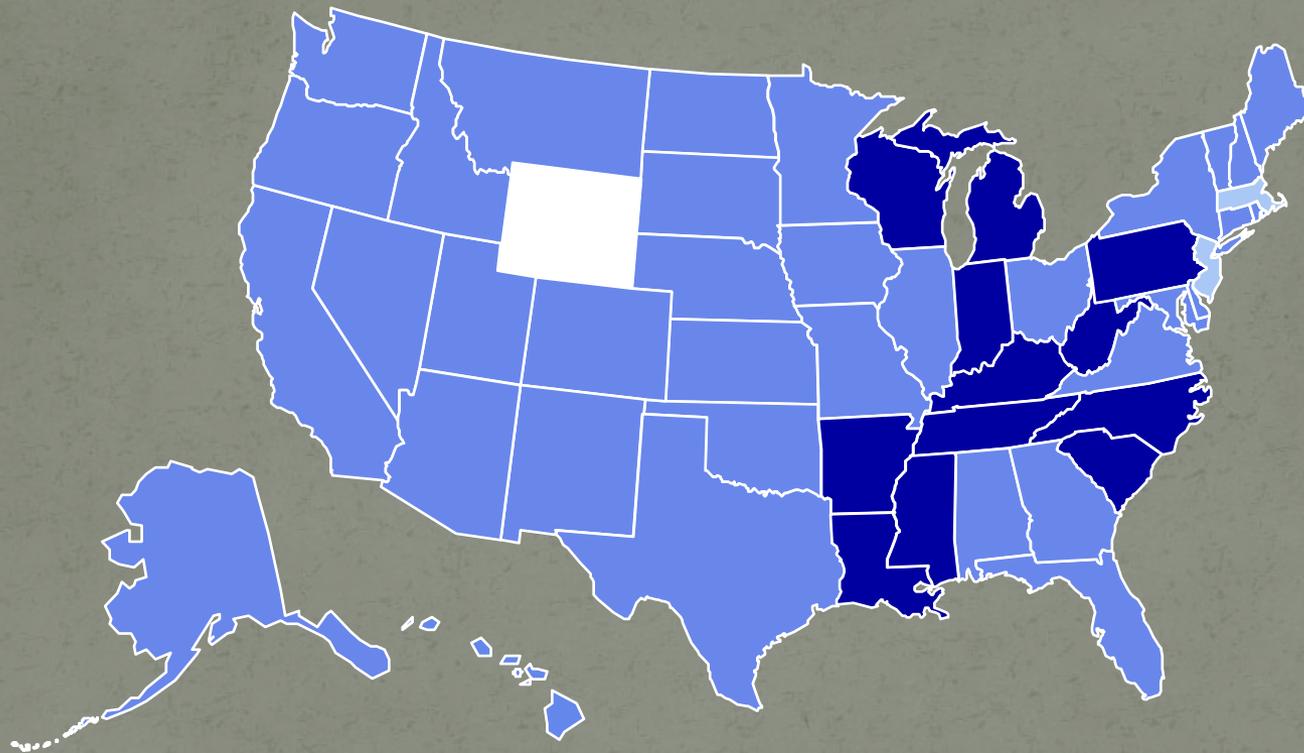
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(Behavioral Risk Factor Surveillance System, CDC, 2005)

Obesity trends among U.S. adults: 1993

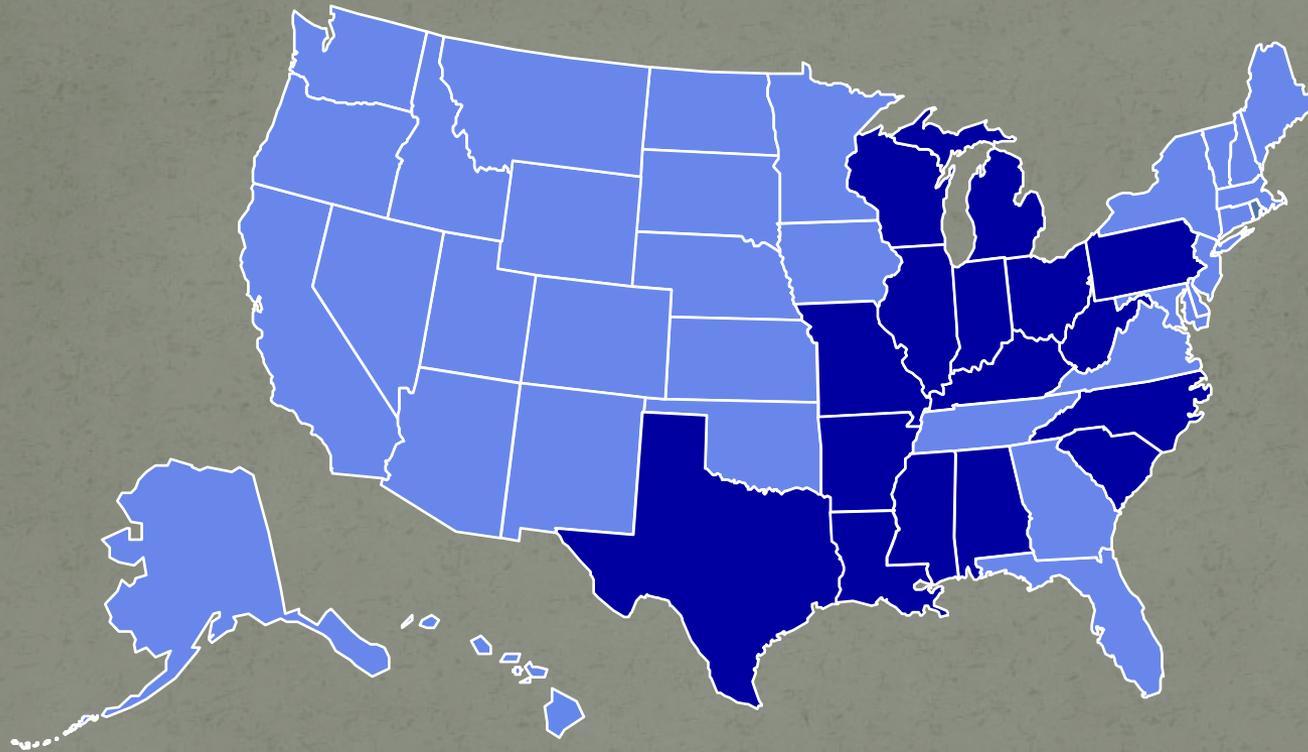
(*BMI ≥ 30 , or ~ 30 lbs overweight for 5' 4" woman)



(Behavioral Risk Factor Surveillance System, CDC, 2005)

Obesity trends among U.S. adults: 1994

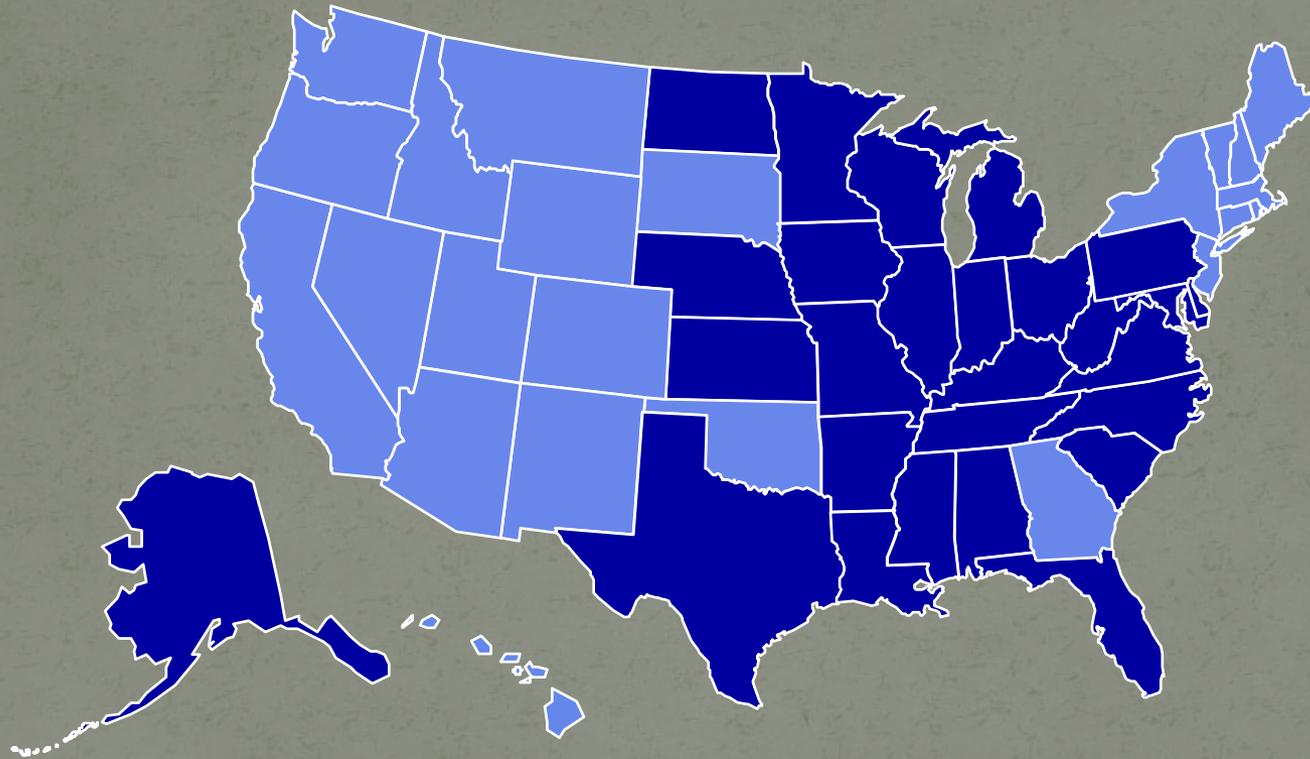
(*BMI ≥ 30 , or ~ 30 lbs overweight for 5' 4" woman)



(Behavioral Risk Factor Surveillance System, CDC, 2005)

Obesity trends among U.S. adults: 1995

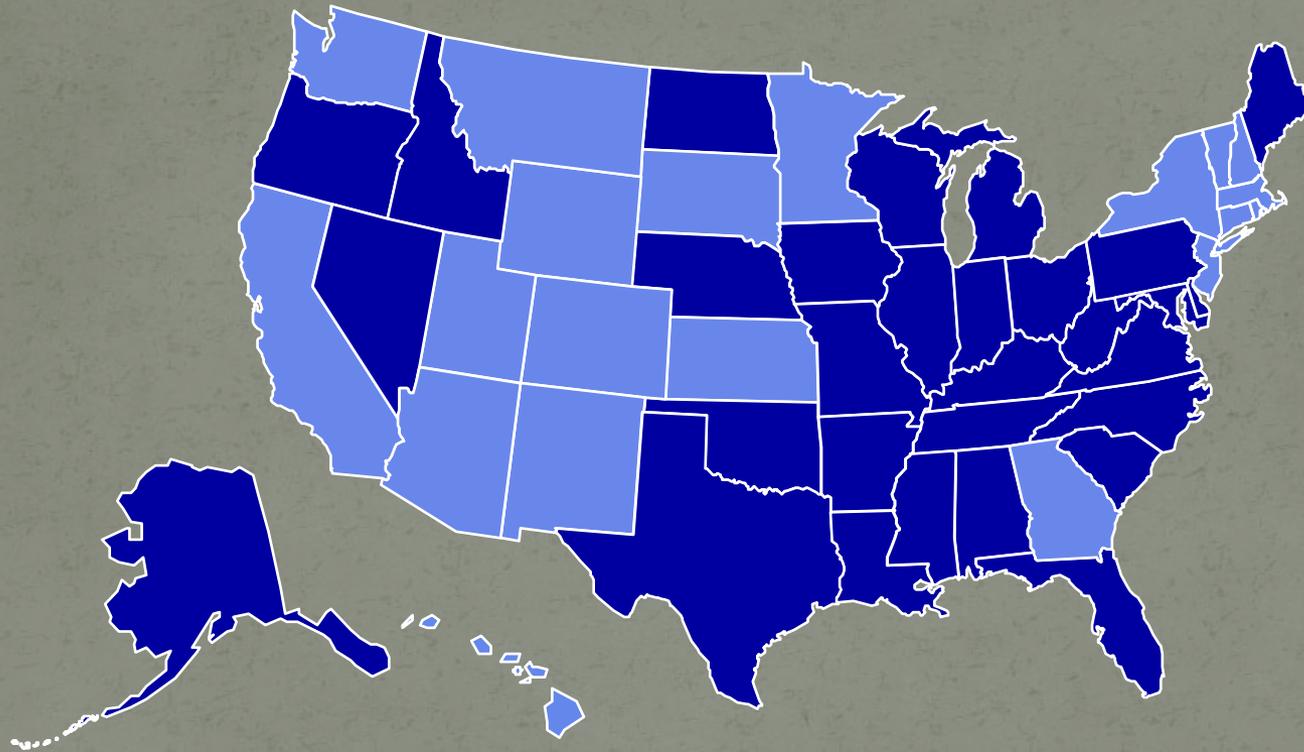
(*BMI ≥ 30 , or ~ 30 lbs overweight for 5' 4" woman)



(Behavioral Risk Factor Surveillance System, CDC, 2005)

Obesity trends among U.S. adults: 1996

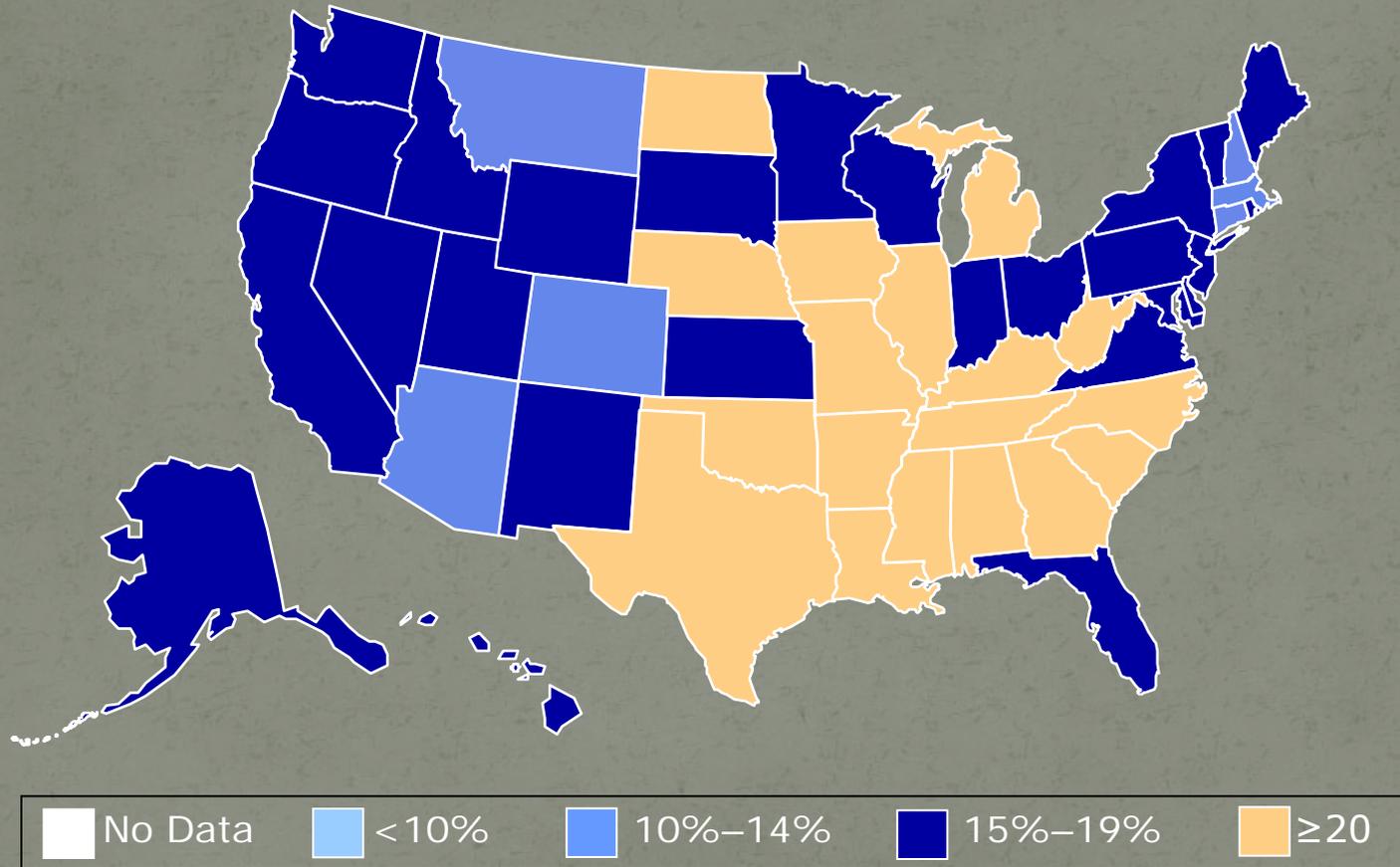
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(Behavioral Risk Factor Surveillance System, CDC, 2005)

Obesity trends among U.S. adults: 1999

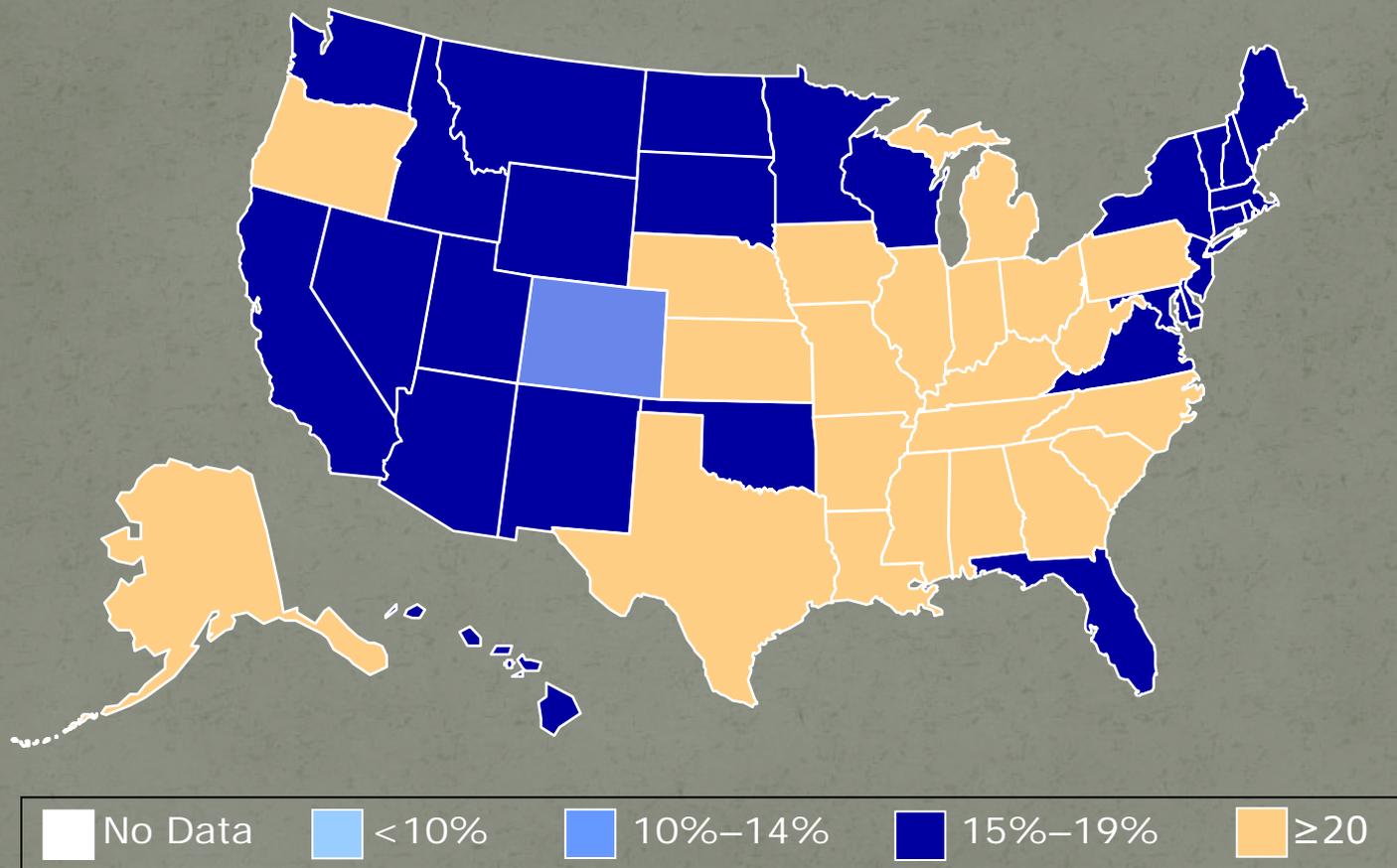
(*BMI ≥ 30 , or ~ 30 lbs overweight for 5' 4" woman)



(Behavioral Risk Factor Surveillance System, CDC, 2005)

Obesity trends among U.S. adults: 2000

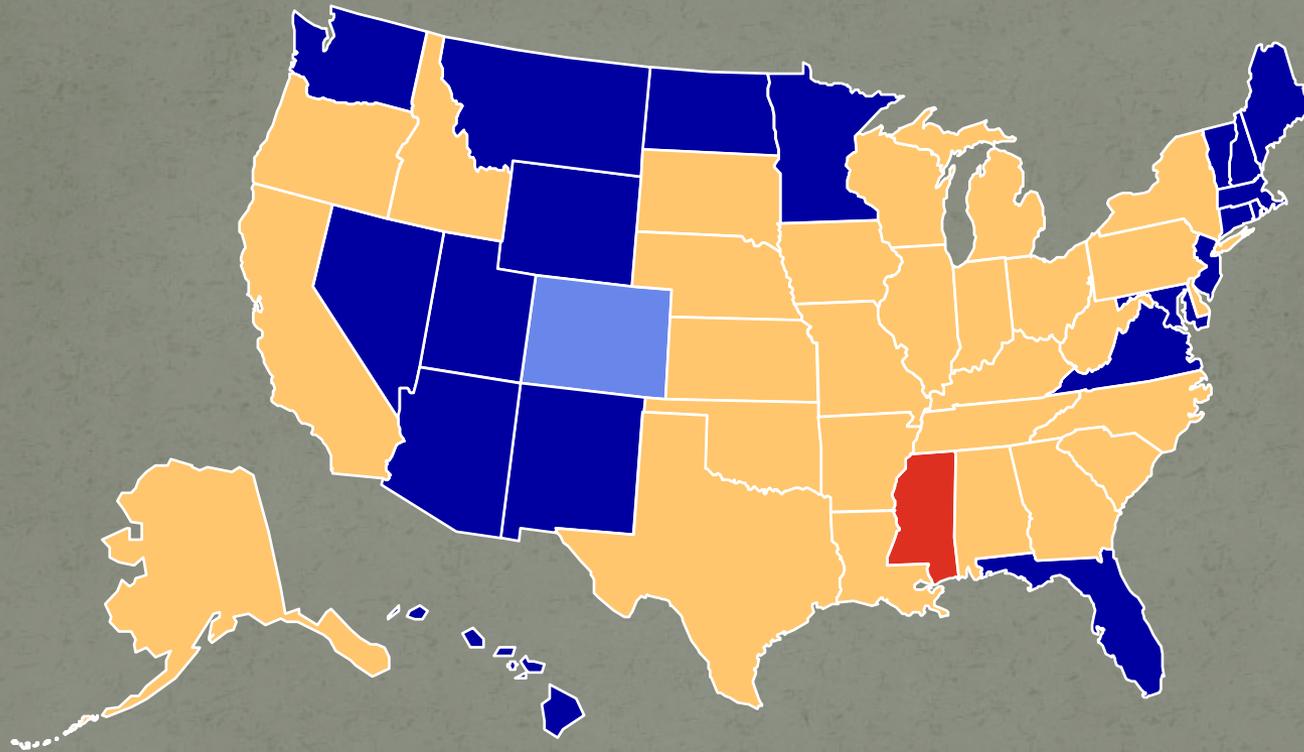
(*BMI ≥ 30 , or ~ 30 lbs overweight for 5' 4" woman)



(Behavioral Risk Factor Surveillance System, CDC, 2005)

Obesity trends among U.S. adults: 2001

(*BMI ≥ 30 , or ~ 30 lbs overweight for 5' 4" woman)

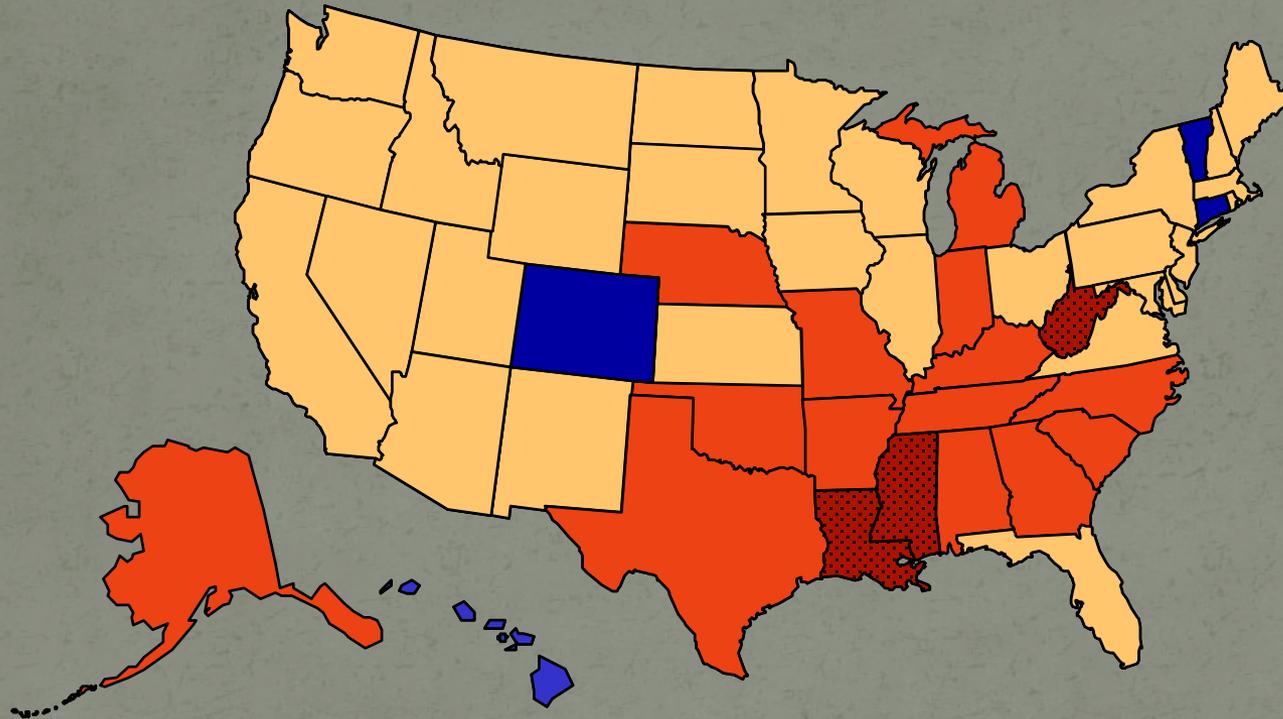


■ No Data ■ <10% ■ 10%–14% ■ 15%–19% ■ 20%–24% ■ $\geq 25\%$

(Behavioral Risk Factor Surveillance System, CDC, 2005)

Obesity trends among U.S. adults: 2005

(*BMI ≥ 30 , or ~ 30 lbs overweight for 5' 4" woman)



 <10%  10%–14%  15%–19%  20%–24%  25%–29%  30%–34%

(Behavioral Risk Factor Surveillance System, CDC, 2005)

Planning Strategies for Healthy Communities



- Pedestrian Infrastructure
- Bicycle Infrastructure
- Transit Accommodations
- Community Gardens
- City Parks

Pedestrian Strategies

- Create Enjoyable and Inviting Places
 - Buffer zones, trees, landscaping
 - Benches, lighting



Pedestrian Strategies

- Develop Continuous Systems
 - Sidewalks are well integrated into the transportation infrastructure
 - Pedestrian-oriented land uses and supportive land use patterns



Pedestrian Strategies

- Accommodate All Users
 - Clear, wide, ADA compliant sidewalks
 - Safe, clearly marked crosswalks
 - Properly maintained



Types of Bicycle Facilities



Shared Roadway



Signed Bicycle Route



Bicycle Lanes



Shared Use Path

Bicycle Strategies

- Develop Continuous Systems
 - Bicycle infrastructure is well integrated into transportation infrastructure
- Remain consistent when designing bicycle network
- Accessible
- Direct connection to destinations



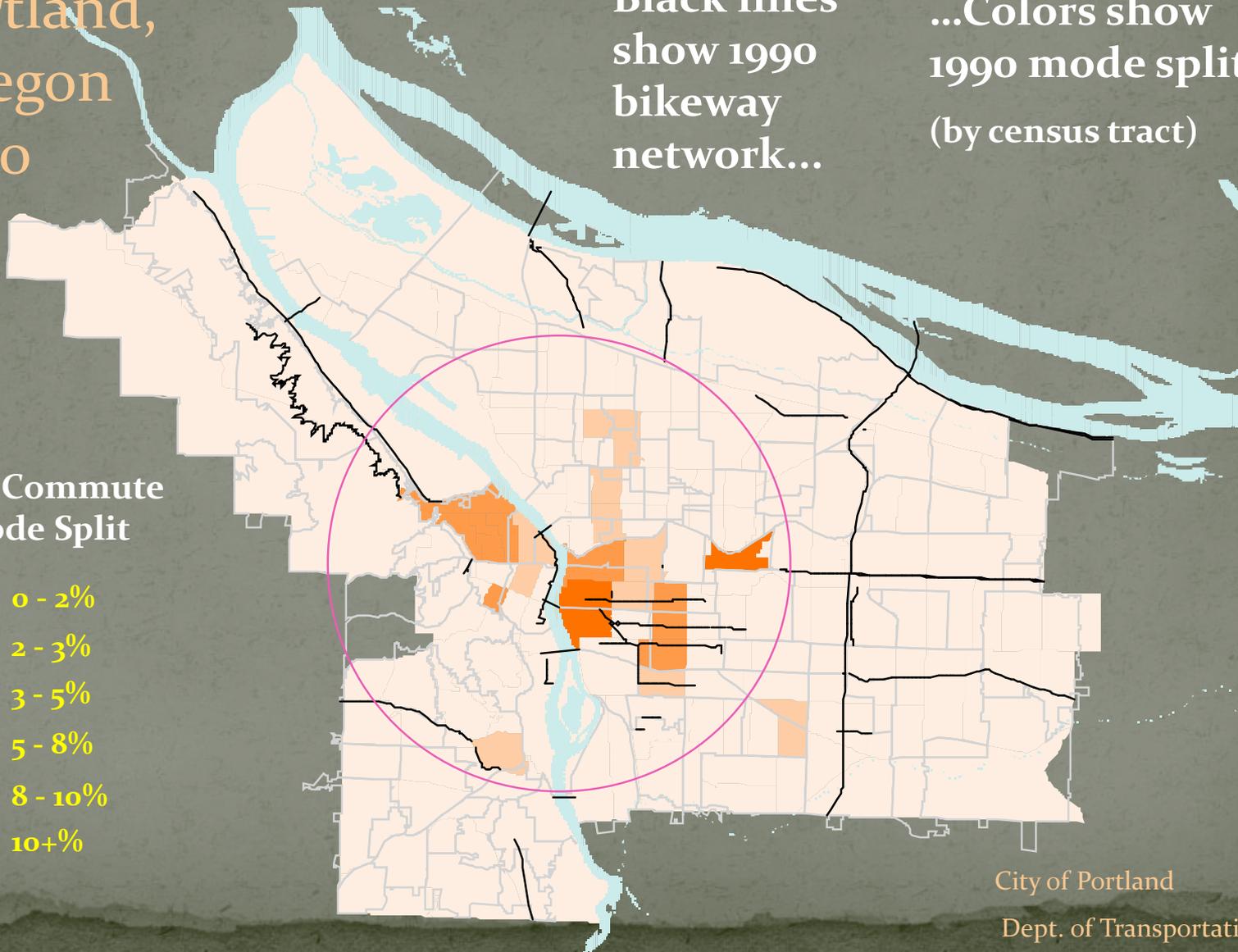
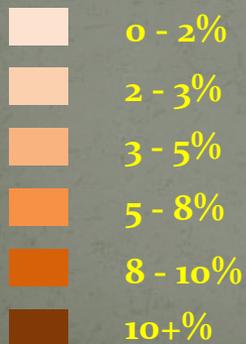
Bike Lanes Encourage Bike Commuting:

Portland,
Oregon
1990

Black lines
show 1990
bikeway
network...

...Colors show
1990 mode splits
(by census tract)

Bike Commute
Mode Split



City of Portland

Dept. of Transportation

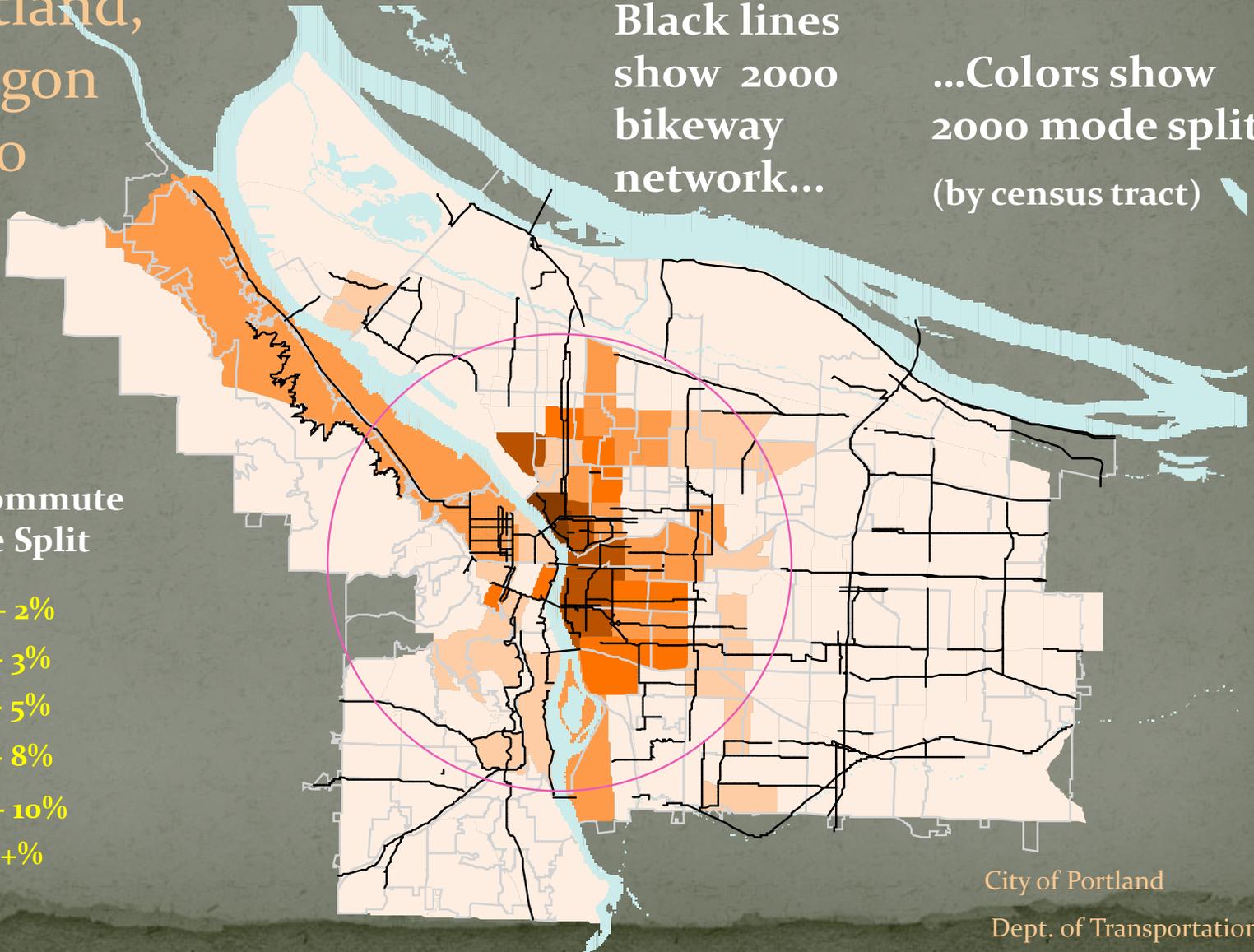
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Dept. of Transportation

Bicycle Strategies

- Increase Safety Through Efficient Design
 - Bicycle infrastructure flows well through intersections



Bicycle Strategies

- Facilities Are Well Maintained
 - Fix cracks, pot-holes, drainage areas, man-holes
 - Snow removal



Transit Strategies

- Create Attractive Places
 - Shelters at transit stops
 - Accessible
 - Safe crossing to bus shelters



Transit Strategies

- Promote Non-Motorized Transportation
 - Bicycle racks at shelters and buses



Community Gardens

- What is a Community Garden?
 - Any piece of land gardened by a group of people
 - Urban, suburban, or rural
 - Neighborhoods, schools, hospitals
 - Individual or community plots
 - Series of plots with produce sold at markets
 - Flowers and/or vegetables



Community Gardens

- Benefits
 - Improved quality of life
 - Promotes community development
 - Creates community interaction
 - Encourages self-reliance
 - Neighborhood beautification
 - Access to nutritious food
 - Reduction of family food budget
 - Conservation of resources
 - Reduction of crime in the neighborhood
 - Preservation of green space
 - Reduction of urban heat island effect
 - Creates opportunity for exercise, education, relaxation

City Parks

- Types
 - Town Centers
 - Waterfronts
 - Greenways
 - Pocket Parks



Images: <http://filmnorthflorida.com>
http://en.wikipedia.org/wiki/File:Waterfront_Park,_Portland.jpg
http://www.bostonbyfoot.org/tours/Rose_Kennedy_Greenway

City Parks

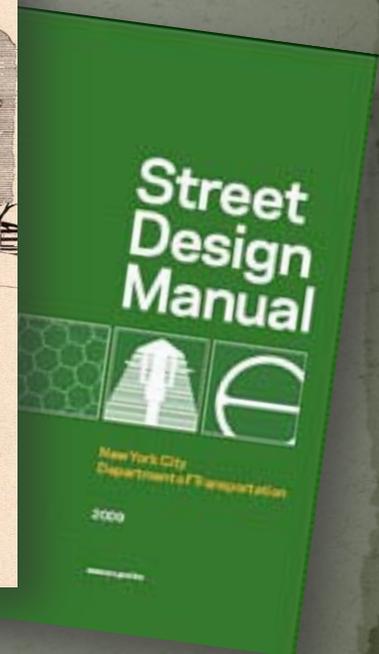
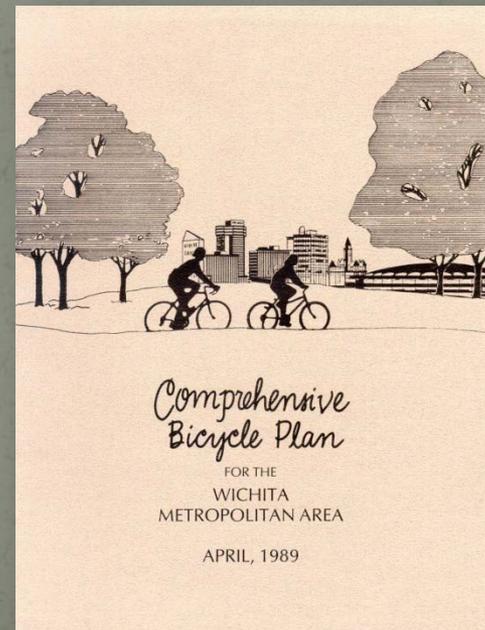
- Benefits
 - Improved Health
 - Physical
 - Psychological
 - Social



Policies and Implementation Tools

Approaches include:

- Policies (comprehensive plan, complete streets)
- Separate health-related plan
- Codes and ordinances
- Design standards
- LEED-ND
- Health impact assessments
- Health indicators



Comprehensive Plan

What is it?

- Long-range plan that lays out community's vision in terms of goals and strategies.
- Protects public health, safety, and welfare.

Two basic approaches:

- Full comp. plan update
- Text amendments



Comprehensive Plan

Examples:

➤ King County, WA

- Promote urban centers and mixed-use projects.
- Increase availability and improve comfort and attractiveness of taking transit, ridesharing, walking, and bicycling.

➤ Mission, KS

- Maintain and preserve existing open space and natural features to enhance character of built environment; promote neighborhood stability, public health and safety; and provide for outdoor recreation and visual enjoyment.
- Plan for multimodal transportation citywide.

Complete Streets Policy

What is a Complete Streets Policy?

- A complete streets policy ensures that the entire right-of-way is routinely designed and operated to enable safe access for all users.



Image <http://www.sightline.org>

Complete Streets Policy

The Best Complete Streets Policies...

- Specify exceptions
- Require high-level approval of exceptions
- Use best design standards
- Allow flexibility in balancing user needs
- Apply to all phases of all projects
- Provide direction for how to promote the use of alternative transportation
 - Marketing
 - Parking management
 - Incentives for non-drivers
 - Costs for drivers

Complete Streets Policy

Complete Street Policies: 2 Steps

- Institutionalize
 - Restructure procedures
 - Rewrite design manuals
 - Retrain planners and engineers
 - Retool measures to track outcomes
- Retrofit
 - Identify and improve incomplete streets

Complete Streets Policy

City of Chicago Complete Streets Policy:

“The safety and convenience of all users of the transportation system, including pedestrians, bicyclists, transit users, freight, and motor vehicle drivers, shall be accommodated and balanced in all transportation and development projects and through all phases of a project so that even the most vulnerable - children, elderly, and persons with disabilities - can travel safely within the public right-of-way.”

Separate Health-Related Plan

What is it?

- Thematic plan that goes beyond scope of required comprehensive plan content and elements.
- Often influences decisions made in overarching comprehensive plan and adopted as extension of comprehensive plan.

Example:

- Fremantle, Western Australia's Physical Activity Strategic Plan
 - Provides framework and objectives to help city plan, develop, implement, and evaluate physical activity programs and services.

Codes and Ordinances

What are they?

- Implement policies of comprehensive plan.
- Regulatory.



Example:

- Seattle's Land Use Code provides for pedestrian district overlays in commercial zones. Intended to preserve and encourage pedestrian-oriented retail areas.
- Liberty, MO's Unified Development Ordinance requires that all residential development projects dedicate land or equivalent fee-in-lieu dedication for public parks and open space.

Design Guidelines

What are they?

- Serve as reference and resource, clarifying what is expected.
- Aren't always regulatory.

Example:

- Tacoma, Washington's Complete Streets Guidelines.
 - Provides articulated vision of how different street types can be retrofitted in accordance with city policies.

Which Approach is Right?

- Could combine several of these approaches, ideally following comprehensive plan amendments with relevant ordinance revisions.



LEED-ND Rating System

- LEED-ND is rating system that integrates principles of smart growth, new urbanism, and green building into first national standard for neighborhood design.
- Could contribute to the following health benefits:
 - Reduced risk of obesity, heart disease, and hypertension by integrating physical activities as daily part of resident's lives.
 - Reduced risk of asthma and other respiratory diseases, contributions to climate change from air pollution, and injuries from motor vehicles.
 - Increased socially equitable and socially engaging communities.
 - Improved mental health of the community.
 - Reduced risk of cancer and other chronic diseases.

Health Impact Assessment

- What is it?
 - Tool by which policies, plans or projects may be judged as to their potential effects on health.
 - Used to objectively evaluate potential health effects of project or policy before built or implemented.
 - Can provide recommendations to increase positive health outcomes and minimize adverse health outcomes.
 - Voluntary or regulatory process that focuses on health outcomes such as obesity, physical inactivity, asthma, injuries, and social equity.

Health Impact Assessment

Example

- San Francisco: Zoning Request for New Housing Development Near Congested Roadway
 - HIA completed by San Francisco Department of Public Health in collaboration with Planning Dept.
 - Impact: Air modeling showed air pollution “hot spots” closest to major roadway.
 - Outcome: New buildings required to include particulate air filtration.

Public Health Indicators

- Percent adults obese
- Childhood and adult asthma prevalence
- Childhood and adult asthma hospitalization
- Motor vehicle injuries
- Diabetes prevalence
- Air Quality
- Water Quality



Decatur, Georgia

- Transportation plan links future transportation decisions to health-related goals.
- Health impact assessment (HIA) is incorporated into plan.
- Created position of active living director as distinct role with its own responsibilities within city government (Active Living Division).
- City goal of ensuring convenient access to affordable fresh fruits and vegetables through community gardens.



Resources

- Centers for Disease Control and Prevention - www.cdc.gov/healthyplaces
- U.S. Green Building Council - www.usgbc.org/ShowFile.aspx?DocumentID=1736
- LEED for Neighborhood Development home page - www.usgbc.org/leed/nd
- Active Living By Design - www.activelivingbydesign.org
- National Complete Streets Coalition - www.completestreets.org
- Walkability Checklist - www.walkinginfo.org
- Bikeability Checklist - www.bicyclinginfo.org

Questions?

