



South Bend, Purdue

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Nathan Roseberry, P.E.

David Smith, AICP

T. Y. Lin International

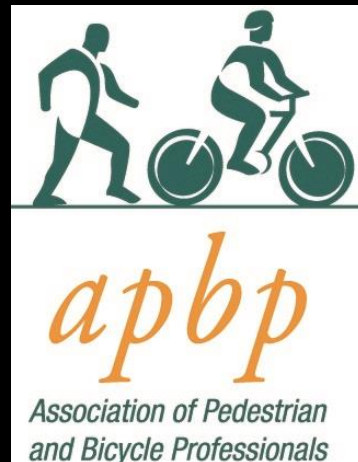


IMPLEMENTING COMPLETE STREETS

INTRODUCTION

(Module 1)

Developed in collaboration with



Incomplete streets – what are they?

No sidewalks

Too dangerous to
cross on foot



Incomplete streets – what are they?

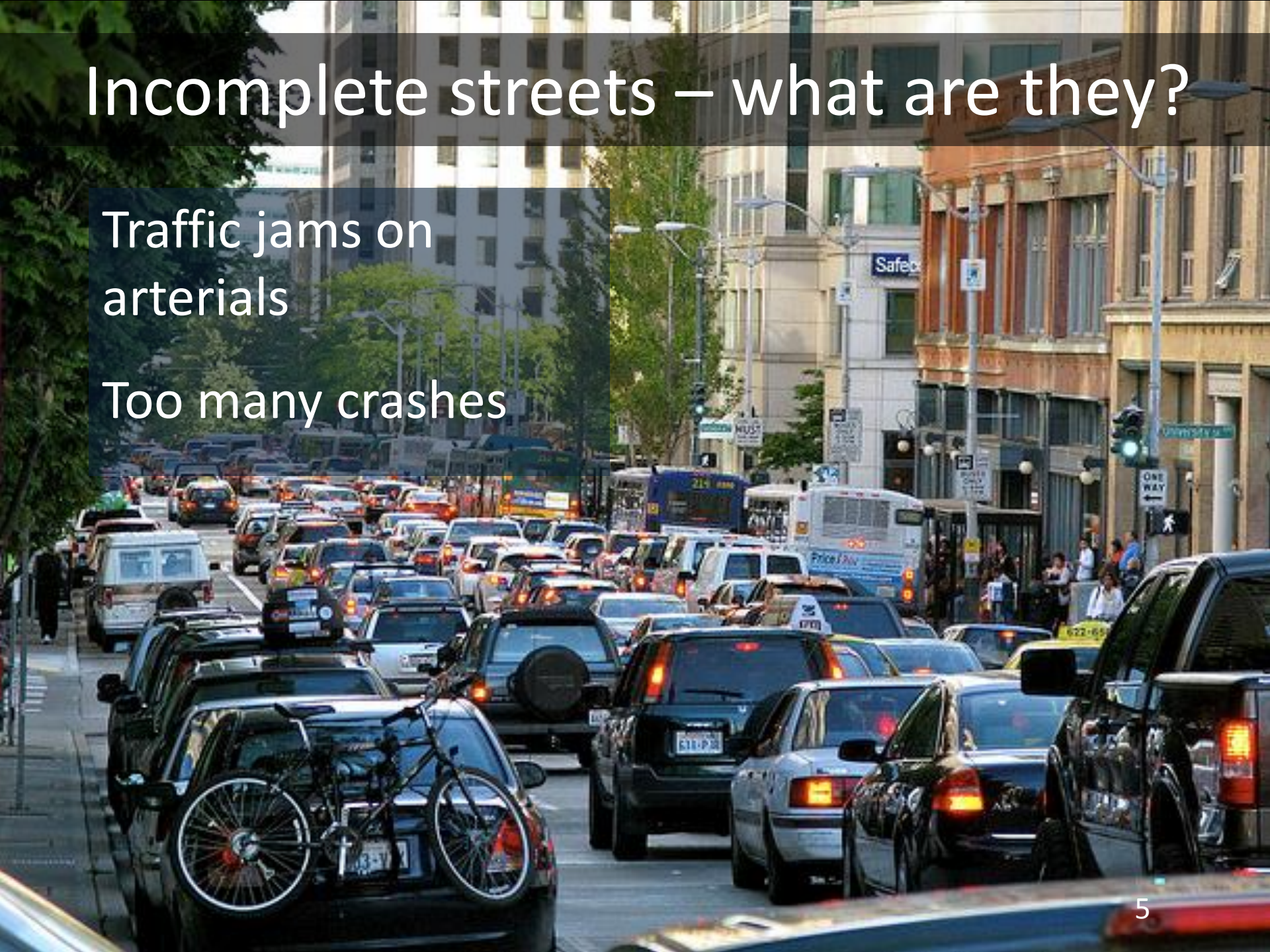
Unsafe for bicyclists



Incomplete streets – what are they?

Traffic jams on
arterials

Too many crashes



Incomplete streets – what are they?

Uninviting for bus riders



Incomplete streets – what are they?

Inaccessible for
wheelchair users



Incomplete streets – what are they?

No room for people!



We know how to build right



We know how to build right



We know how to build right



We know how to build right



We know how to build right



Yet many roads are built like this



Yet many roads are built like this



Yet many roads are built like this



What are Complete Streets?



Complete Streets are streets for everyone, no matter who they are or how they travel.

Introductions: Who are we?

Nathan Roseberry, P.E.
Senior Transportation Engineer
nathan.roseberry@tylin.com



David Smith, AICP
Senior Transportation Planner
david.smith@tylin.com



Introductions: Who are you?

- Your name / your organization / your job
- How do you relate to Complete Streets?
- What you hope to get out of today



Outline of Today's Implementation Workshop

1. Introduction: Complete Streets overview
2. Design considerations
3. Planning for Complete Streets
4. Decision-making processes
5. Performance Measures
6. Implementation strategies and Next Steps



Everyone Benefits from Complete Streets



Complete Streets policies provide for all users



A Complete Streets policy...

Ensures that the entire right-of-way is planned, designed, constructed, operated, and maintained to provide safe access for all users



Why have a Complete Streets policy?

To make the needs of all users the **default** for **everyday** transportation planning practices

- Reverse burden of proof: assume bike, walk, transit unless proven otherwise



Why have a Complete Streets policy?

To shift
transportation
investments so they
create better streets
opportunistically

- Take advantage of all
planning,
construction,
operations and
maintenance activities



Why adopt a policy?

To **make streets better each time you touch them**, not just via capital planning

- Small, low-cost, quick projects can have high impact



Why have a Complete Streets policy?

To ensure every project creates better streets *now* with **current funding sources**



Why have a Complete Streets policy?

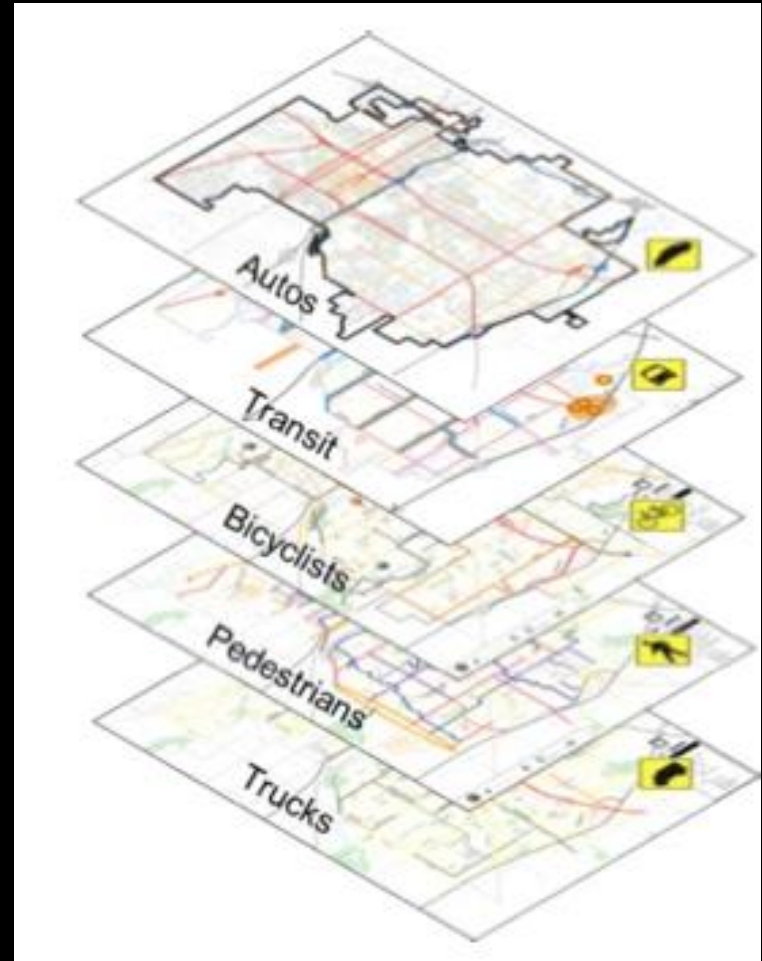
To **save money**

- Retrofits cost more than getting it right initially



Why have a Complete Streets policy?

To gradually create a complete **network** of roads that serve all users



Why have a Complete Streets policy?

To give transportation professionals **political and community support** for innovative solutions that help make active living possible



Why have a Complete Streets policy?

To apply solutions
across a community
and **address**
systematic inequities



Why have a Complete Streets policy?

Transit ridership is growing faster than population or driving

About **one-third** of Americans don't drive:

- ✓ 21% of Americans over 65
- ✓ Children under 16
- ✓ Those with certain disabilities
- ✓ Those without cars



Who needs Complete Streets?

1 in 12 households do not have access to a vehicle

1 in 5 Americans aged 65+ do not drive

100% of children under 15 do not drive



Complete Streets in demand

66%

of Americans want more transportation options so they have the freedom to choose how to get where they need to go.

73%

currently feel they have no choice but to drive as much as they do.

57%

would like to spend less time in the car.

Future of Transportation National Survey (2010)



Who wants Complete Streets?

47%

of older Americans say it is unsafe to cross a major street near their home.

54%

of older Americans living in inhospitable neighborhoods say they would walk and bike more often if the built environment improved.

56%

express strong support for adoption of Complete Streets policies.



The tremendous potential

Of all trips:

39%

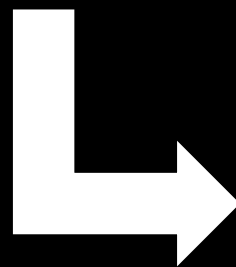
are less than
3 miles

17%

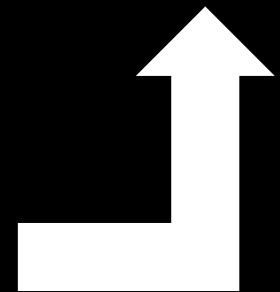
are less than
1 mile

47%

are driven



of these trips...



Changing preferences

- Aging population: by 2025, 1 in 5 will be 65+
- Younger generation prefers multimodal travel
- More demand for “in town” living

Old safety paradigm



New safety paradigm



Built environment matters



Pedestrian scale is safer for everyone



Incomplete streets are unsafe



More than 40% of pedestrian deaths in 2007 and 2008 occurred where no crosswalk was available.

Incomplete streets are unsafe

Especially for:

- People of color
- Low-income communities
- Older adults



Pedestrian crashes

↓ 88% with
sidewalks

↓ 69% with hybrid
beacons

↓ 39% with medians

↓ 29% with street
conversion (road diet)

People with disabilities

Nearly 1 in 5
Americans have a
disability

ADA requires
sidewalks in urban
areas

Reduce the need for
expensive paratransit
service



Children

17% of kids and teens are obese.

Limited physical activity contributes to the obesity epidemic.

Dedicated, safe space for bicycling and walking help kids be active and gain independence.



Transit service

Connect to work,
shops, schools, and
homes

Create smooth,
predictable trips by
planning and
designing for transit
routes



Fixed route accessibility

1 year of paratransit
service for 1 daily
commuter: \$38,500

Making a transit stop
accessible:
\$7,000 - \$58,000



Health

We are moving
without *moving*

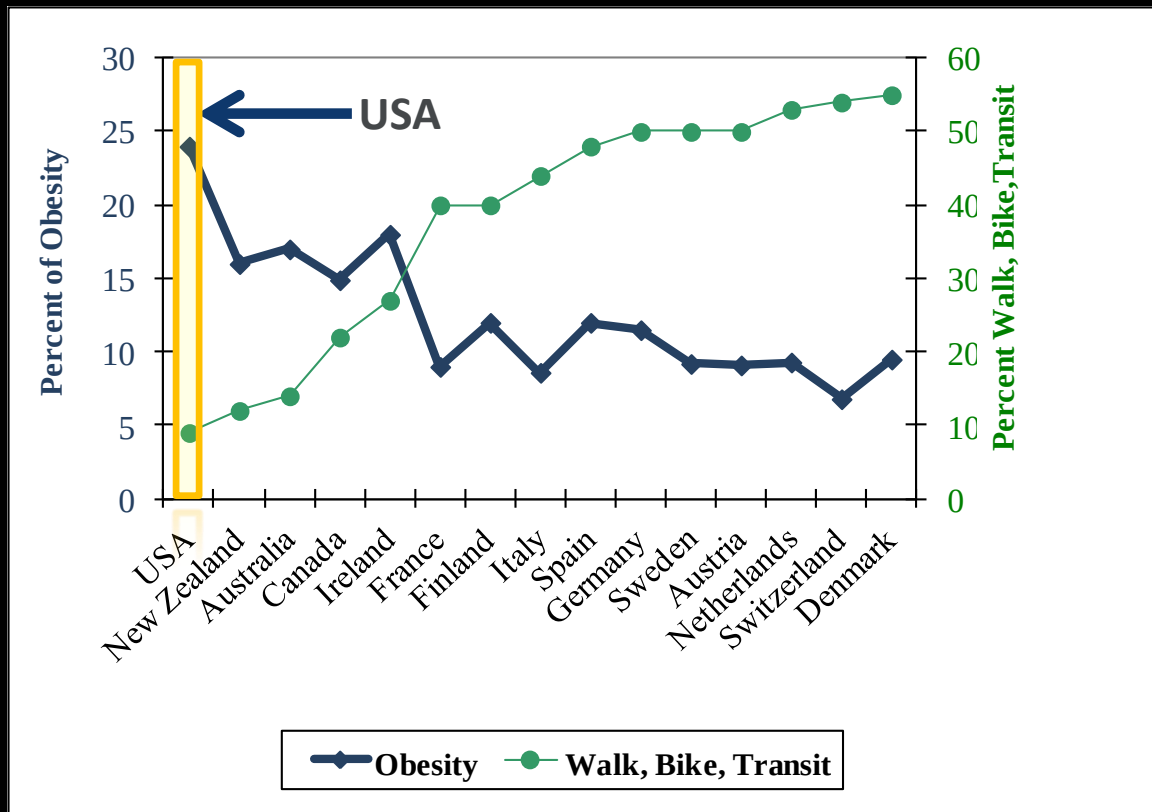
60% are at risk for
diseases associated
with inactivity:

- Diabetes
- High blood pressure
- Other chronic diseases



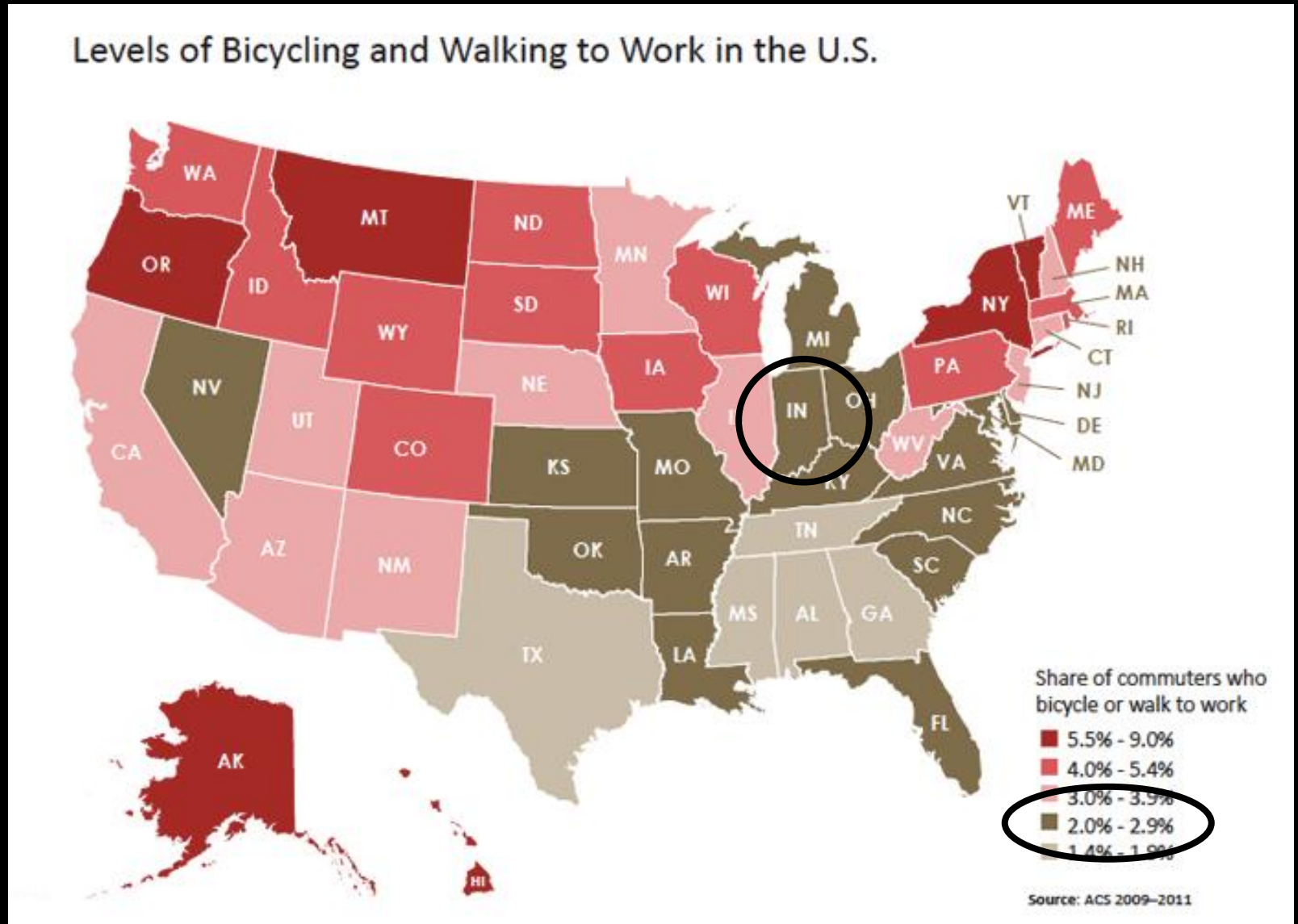
Health Benefits

- Obesity is lower in places where people use bicycles, public transportation, and their feet.



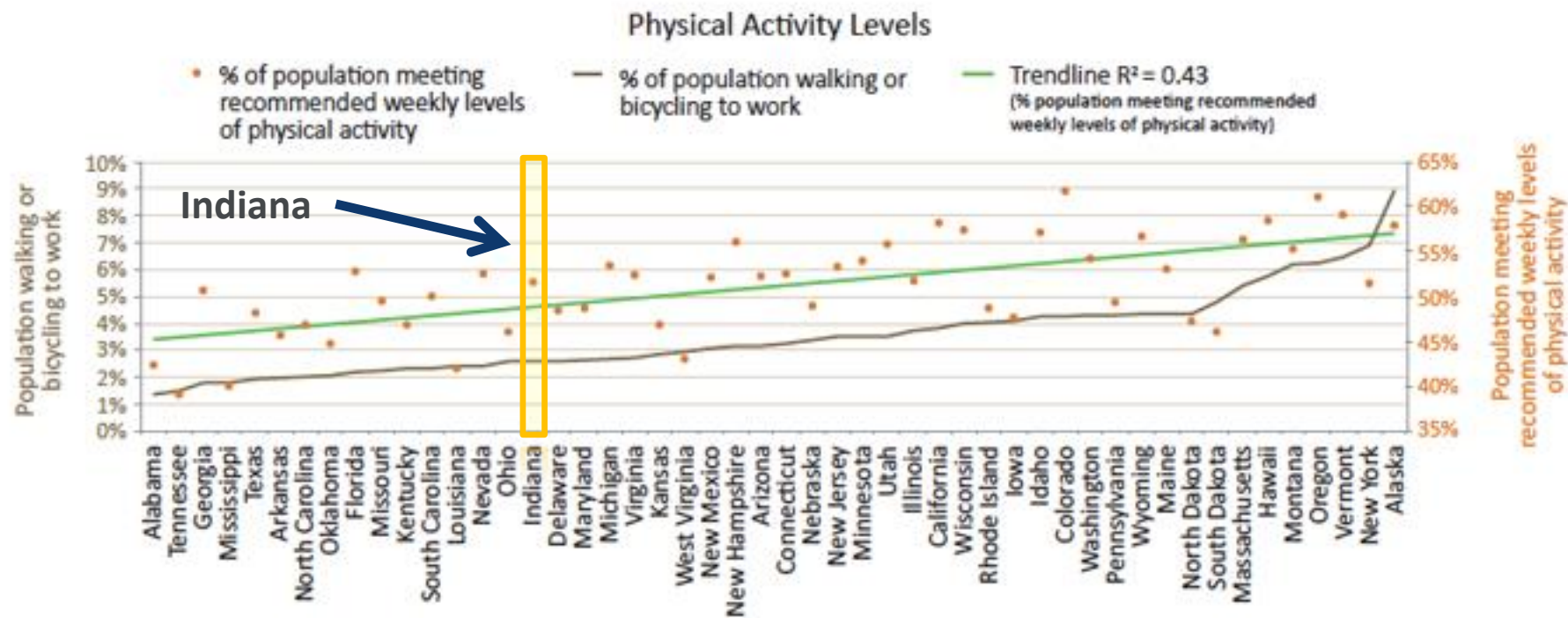
Pucher, "Walking and Cycling: Path to Improved Public Health," Fit City Conference, NYC, June 2009

Levels of walking/bicycling



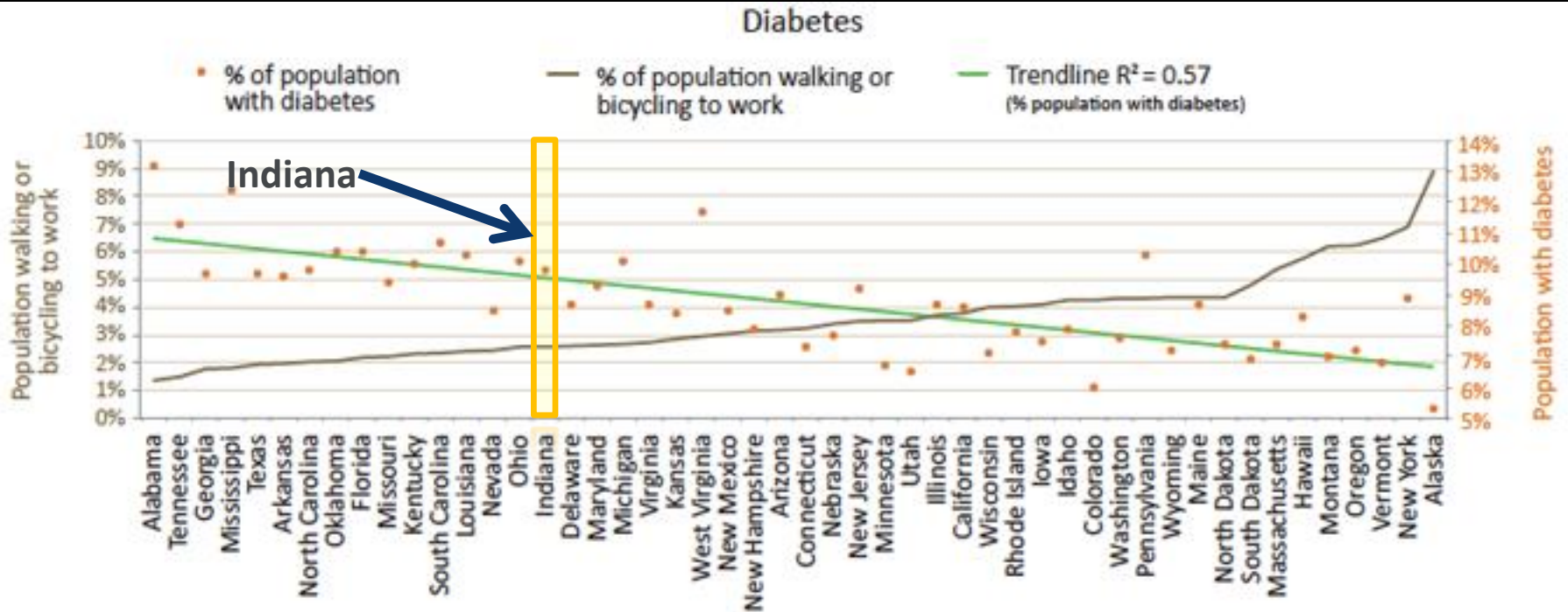
Health indicators vs. walking/bicycling

Comparing Health Indicators Among Adults to Bicycling and Walking Levels



Sources: ACS 2009–2011, BRFSS 2011

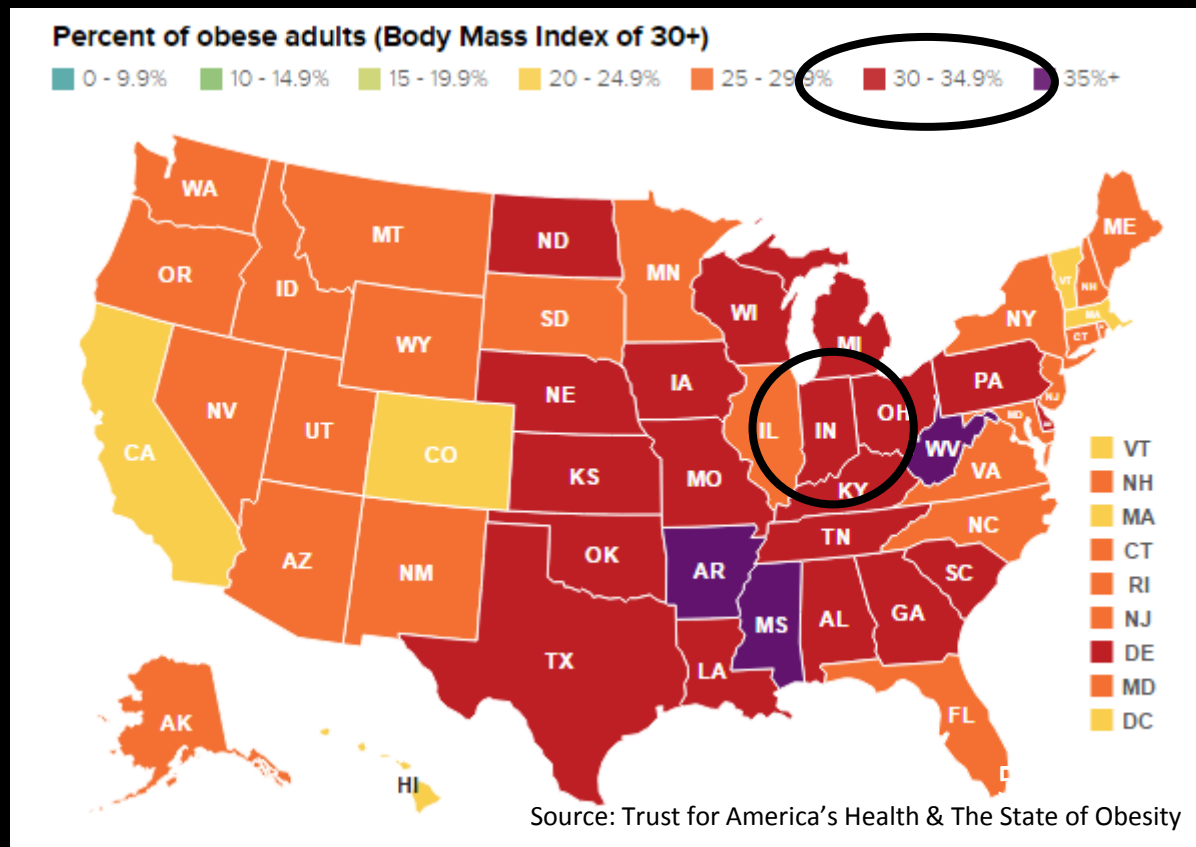
Diabetes vs. walking/bicycling



Sources: ACS 2009–2011, BRFSS 2010

Benefits: physical activity

- Adult obesity rate in the US is **30%**
- Adult obesity rate in Indiana is **32.7%**
 - Male **31.9%**
 - Female **31.0%**
 - Under 25 **19.9%**



Physical activity

Residents more likely to walk in a neighborhood with sidewalks.

Bike lanes → more bicycling.

1/3 of regular transit users meet min. daily physical activity requirement during their commute.



Economic development

Washington, DC:

\$8m public investment
2003–2004

\$8m private
investment 2005-2007

32 new business
establishments

\$80,000 in sales tax
annually



Economic development

Lancaster, California:

- Reconstruction project
- \$10m public investment
- 50 new businesses
- 800 new jobs
- Vacancy rate: 4%
- Sales tax revenue: ↑ 26%



Walkability = value

+1 point on Walk Score scale = + \$500-\$3,000 in home value.

Walkable commercial neighborhoods in DC:
75% higher office rents than auto-oriented suburban neighborhoods



Wallet-friendly

Transportation is second largest expense for families: ~18% of budget

Low-income households can spend up to 55% of budget on transportation.

Complete Streets give people more control over their expenses.



Quality transit is an economic boon

Economic returns:

- Hudson-Bergen (NJ) LRT: \$5.3b
- Dallas, TX LRT: \$4.2b
- Portland Streetcar: \$4b



Prioritizing transit

Fordham Rd:

20% increase in bus speeds

10% increase in bus ridership

71% increase in retail sales *(at locally-based businesses, compared to 23% borough-wide)*

Washington State – The Old Way

500 miles of highway system are “main streets.”

Over 10 years, 47% of projects on these streets had scope, schedule, or budget changes resulting in delay.



Washington State – Complete Streets

Pilot project: consult community during planning, Complete Streets approach.

Result: Complete Streets planning could have saved \$9m per project—about 30%



Environmental benefits

Fewer emissions

Less noise pollution

Less pavement



Complete Streets Change the Built Environment



Changes intersection design



Changes intersection design



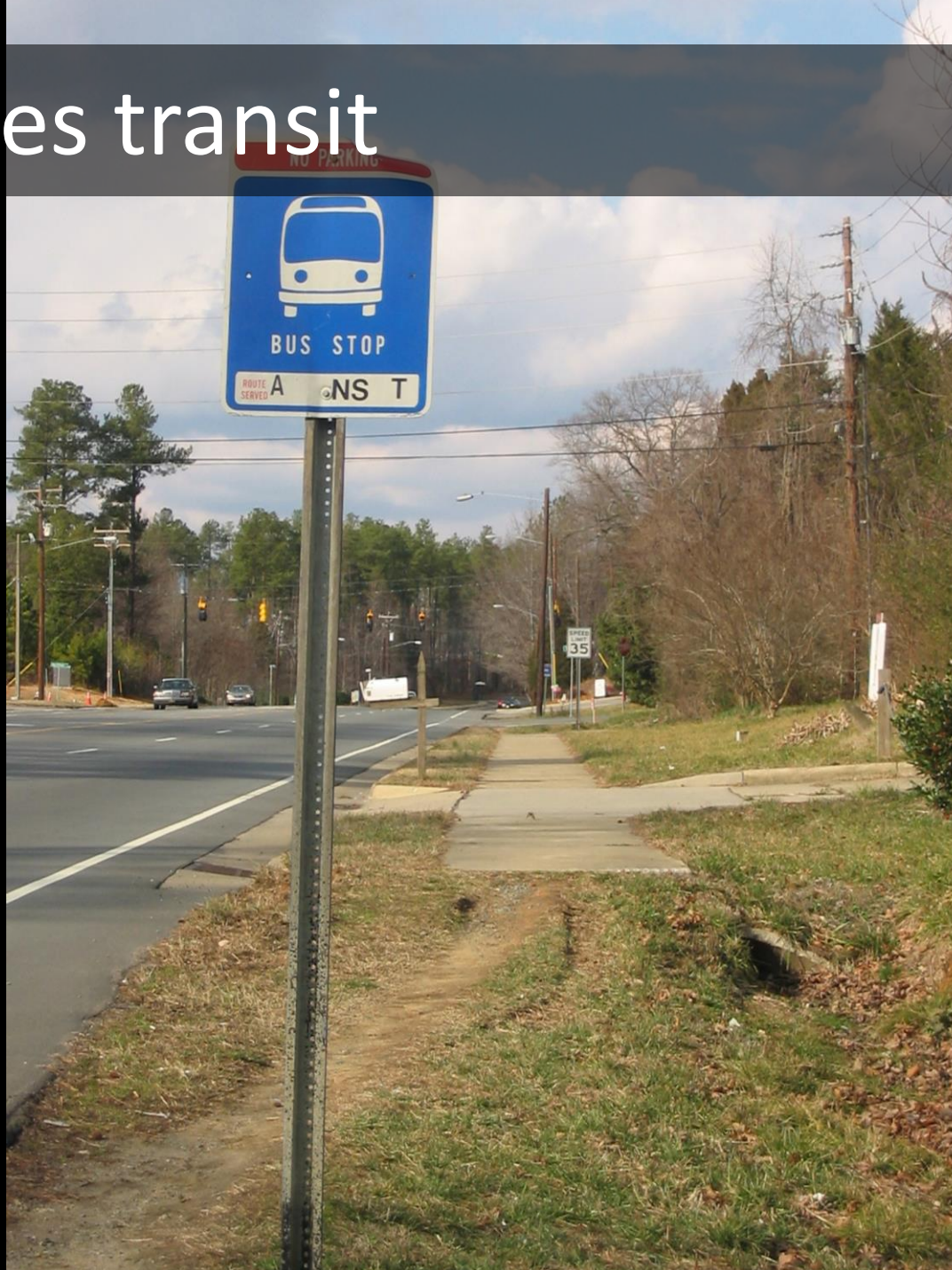
Changes bicycling



Changes bicycling



Changes transit



Changes transit



Changes accessibility



Changes accessibility



Complete Streets are NOT:

- One 'special' street project
- A design prescription
- A mandate for immediate retrofit
- Only accomplished with special funding source
- A silver bullet; other initiatives must be addressed:
 - Land use (proximity, mixed-use)
 - Environmental concerns
 - Transportation Demand Management

No magic formula for design

One size doesn't fit all

Doesn't mean every street has sidewalks, bike lanes and transit

Fits context of community: land use and transportation needs

Better to balance your way to complete streets than to add your way

Low-speed shared streets



Rural roads with shoulders



Rural roads with paved shoulders



Rural roads with shared paths



Low traffic shared streets



Residential skinny streets



Neighborhood greenways



Main Streets



Suburban thoroughfares



Modern roundabouts



Transit routes



Complex urban thoroughfares



Complete Streets and trails



Streets provide **access** to trails

Complete Streets + trails = **comprehensive network**

Complete Streets take pressure off overcrowded trails

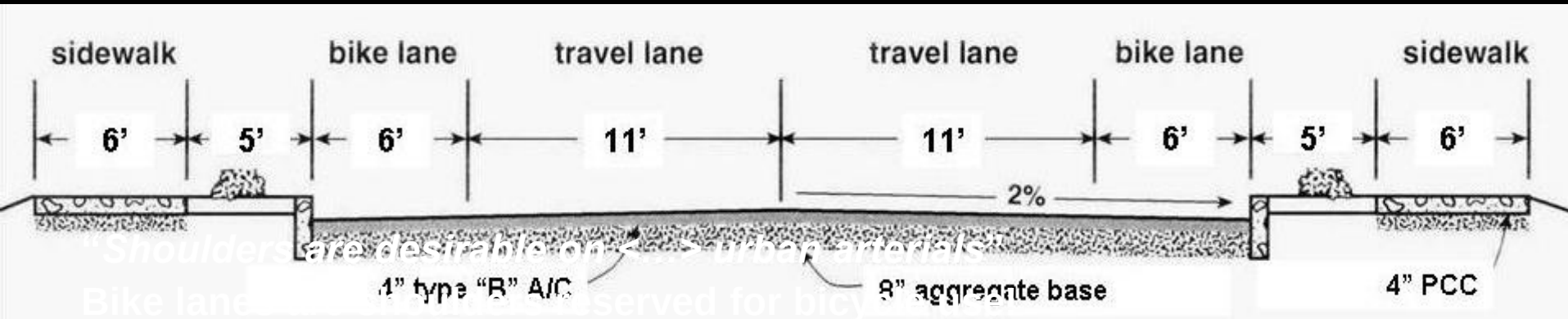
Complete Streets & Context Sensitive Solutions

- Complementary ideas
- Respond to unique transportation and land use needs
- Emphasize stakeholder involvement
- Applied to every street project



What do the design guides say?

The AASHTO “Green Book” states:
“Sidewalks are *integral parts* of city streets”
Not added to – a part of!



AASHTO: American Association of State Highway and Transportation Officials
Green Book: A Policy on Geometric Design of Highways and Streets

2010 USDOT Policy Statement

"...DOT encourages transportation agencies to **go beyond the minimum requirements**, and proactively provide convenient, safe, and **context-sensitive facilities** that foster **increased use by bicyclists and pedestrians of all ages and abilities**, and utilize universal design characteristics when appropriate."

http://www.fhwa.dot.gov/environment/bicycle_pedestrian/overview/policy_accom.cfm



2013 FHWA memo



U.S. Department
of Transportation
Federal Highway
Administration

Memorandum

SENT BY ELECTRONIC MAIL

Subject: **GUIDANCE:** Bicycle and Pedestrian Facility Design Flexibility Date: August 20, 2013

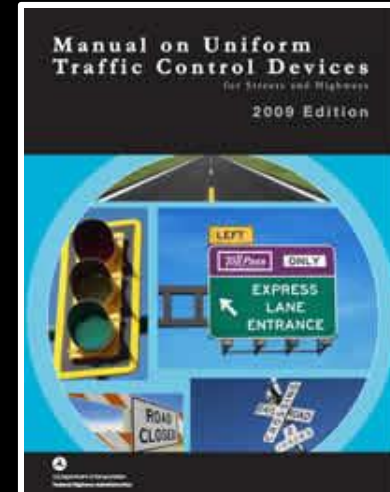
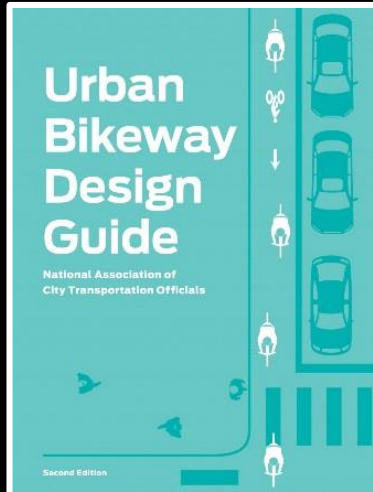
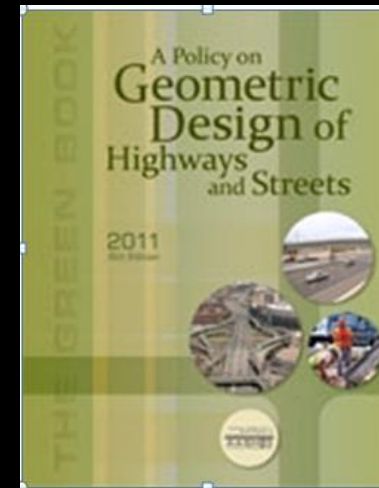
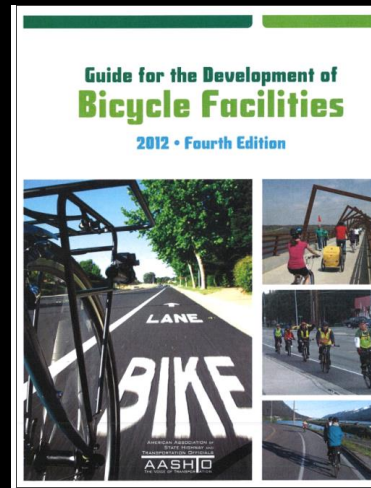
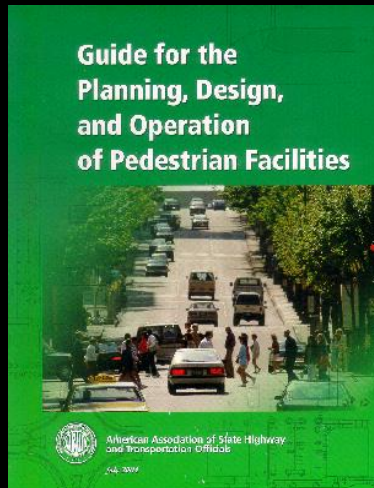
Supports “**taking a flexible approach to bicycle and pedestrian facility design**”

Recommends using AASHTO, ITE, and NACTO guidance

http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design_guidance/design_flexibility.cfm



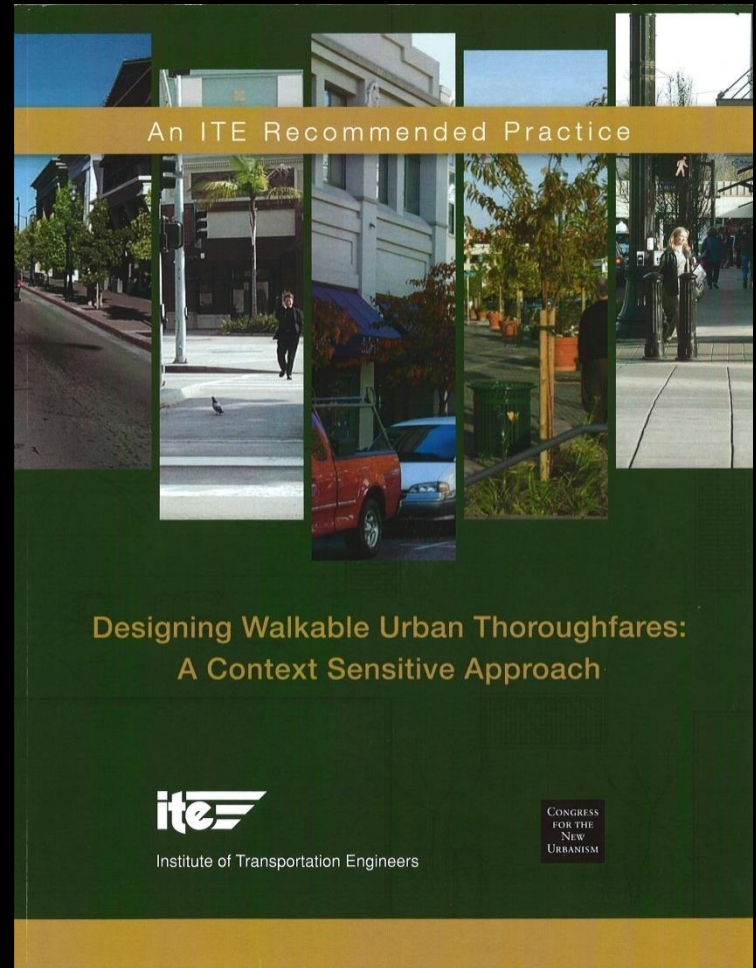
National Guidelines Support Complete Streets



Designing Walkable Urban Thoroughfares:

A Context Sensitive Approach
ITE New Recommended Practice

Sets **target speed** (desirable operating speed) as your primary design element



What about funding?

- Complete Streets is about **using existing resources differently**:
 - No special funding needed!
 - Usual suspects: STP, CMAQ, HSIP, TAP, State, bond measures, sales taxes, property taxes, etc.
- Retrofit funding is important, it is not necessary to get started
- Additional funding is not needed



Does it cost more?

- Avoid costly retrofits
- Requires minimal additional funding
- Save money with better design

Low-cost improvements

- Restripe for bike lanes without moving curbs
- Do not construct overly wide lanes (12' instead of 11')



Low-cost improvements

- Add Sidewalks during drainage project for little cost
- Signal timing for safety and speed control
- Countdown ped signals: low cost, reduce crashes



End of Module

