

# Building Community with *Sticky* Design



Carterville, IL  
Feb. 2014



# The Triple Bottom Line . . .



**Prosperity**



**Planet**



**Healthy  
Economy**

**Healthy  
Environment**

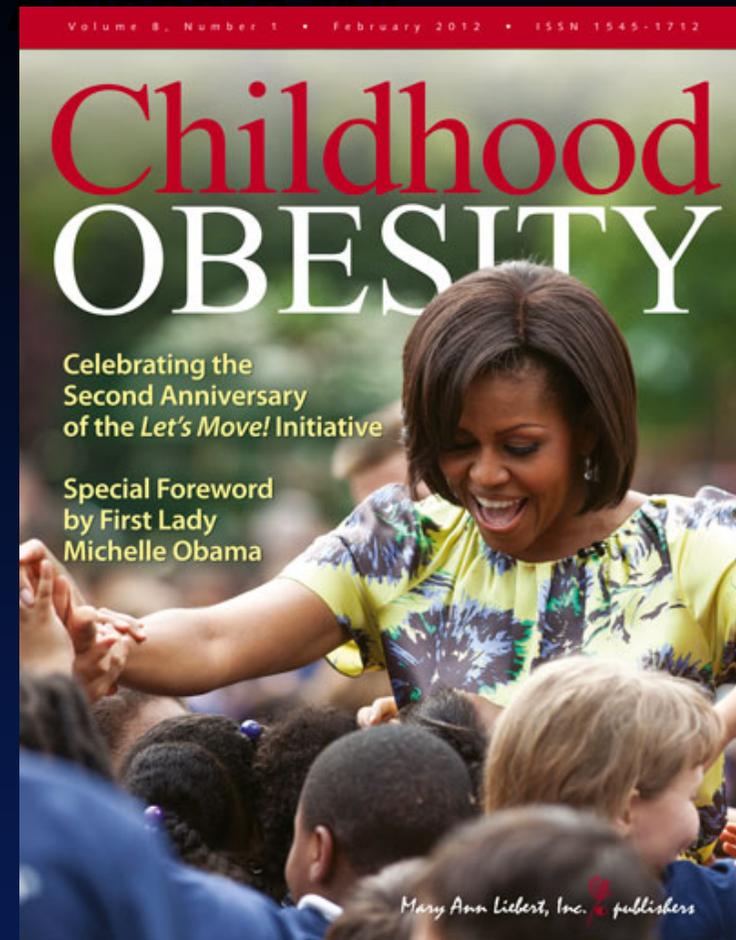
**Healthy  
People**



**People**

# Answers to some common questions:

- Isn't health a result of **personal decisions & habits**?
- If we build it, **will they come**? (People are naturally lazy . . .)
- Shouldn't the **free market** dictate how we build our cities & towns?
- So, what is your **prescription** for healthy design (& how do we **get there**)?



Fenton: *Community Design  
& Policies for Routine  
Physical Activity*  
Feb. 2012



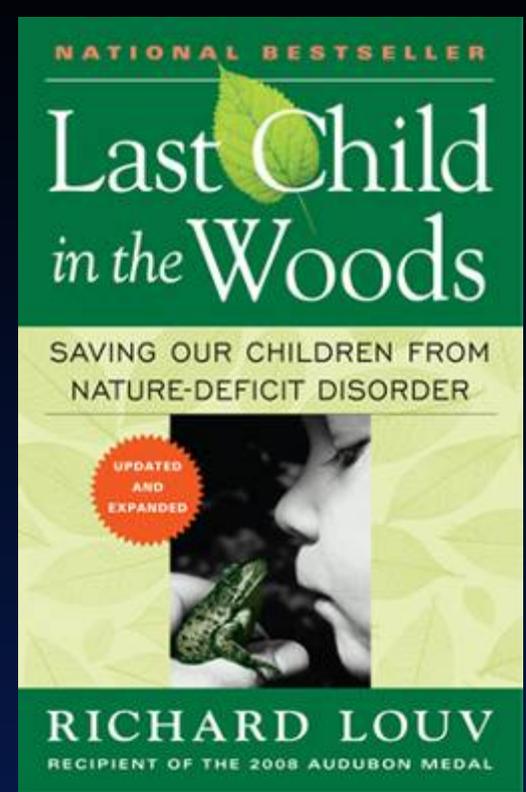
# Youthful recollections





30-Nov-2009

Not just my idea . . .



# Kids held back with 'over-organised' play, says Shane Gould

Pia Akerman

OLYMPIC golden girl Shane Gould has blasted children's sports programs as "over-organised" and holding back the natural development of physical skills, contributing to physical and social problems down the track.



Gould

"I believe that children are over-organised and they don't have enough opportunity out for

— 3, 6, 7, 8 — that is really too young for kids to be involved in organised sport, even though it is modified," she said at the Australian Institute of Public Management annual conference in Adelaide.

— The swimmer, who won five individual medals at the 1972 Munich Olympics, yesterday took aim against children as young as five being pushed into team sports rather than recreating

counted the term "nature deficit disorder" — it's not actually a true disorder, but we are going to start to see problems in children like concentration, hyperactivity to regulate their emotions."

Currently working on a masters-degree in social geography at the University of Tasmania, Gould will publish her thoughts on children's physical activity in the December issue of the *Child* publication in state capitals.

The Matter: the loss of traditional Australian backyards and "impeding" of public play-grounds as factors reducing child-

ren's ability to play naturally.

"Public liability seems to be the main focus for the design of our children's playgrounds and all of us need to take some responsibility for this," Gould wrote.

"The race to blame someone for a child's fall from a piece of playground equipment has had the appalling knock-on effect of almost criminalising child's play and led to this devastating impact on our public spaces.

"Children prefer a log and a stick to play structures."

Speaking after her address,

Gould said home-improvement TV shows emphasising aesthetically pleasing courtyards had encouraged people to ditch traditional backyards.

"Kids need backyards — they need to dig dirt and pull up plants and see the roots. They need to find worms and beetles and make tracks and build cubbies and pull them down again," she said.

A mother of four, Gould raised her children on a property at Margaret River in Western Australia, where outdoor activity was an important part of everyday life. In her article, Gould argues the

Howard government's focus on after-school sports to address childhood obesity was "well-meaning" but failed to attract most children who often had a "can't do" attitude to sports.

"Children, particularly under eight, do not in my opinion, need to be involved in organised sports," she writes.

Gould said children today were stunted due to "lack of movement opportunities" such as reaching, climbing, tugging and spinning.

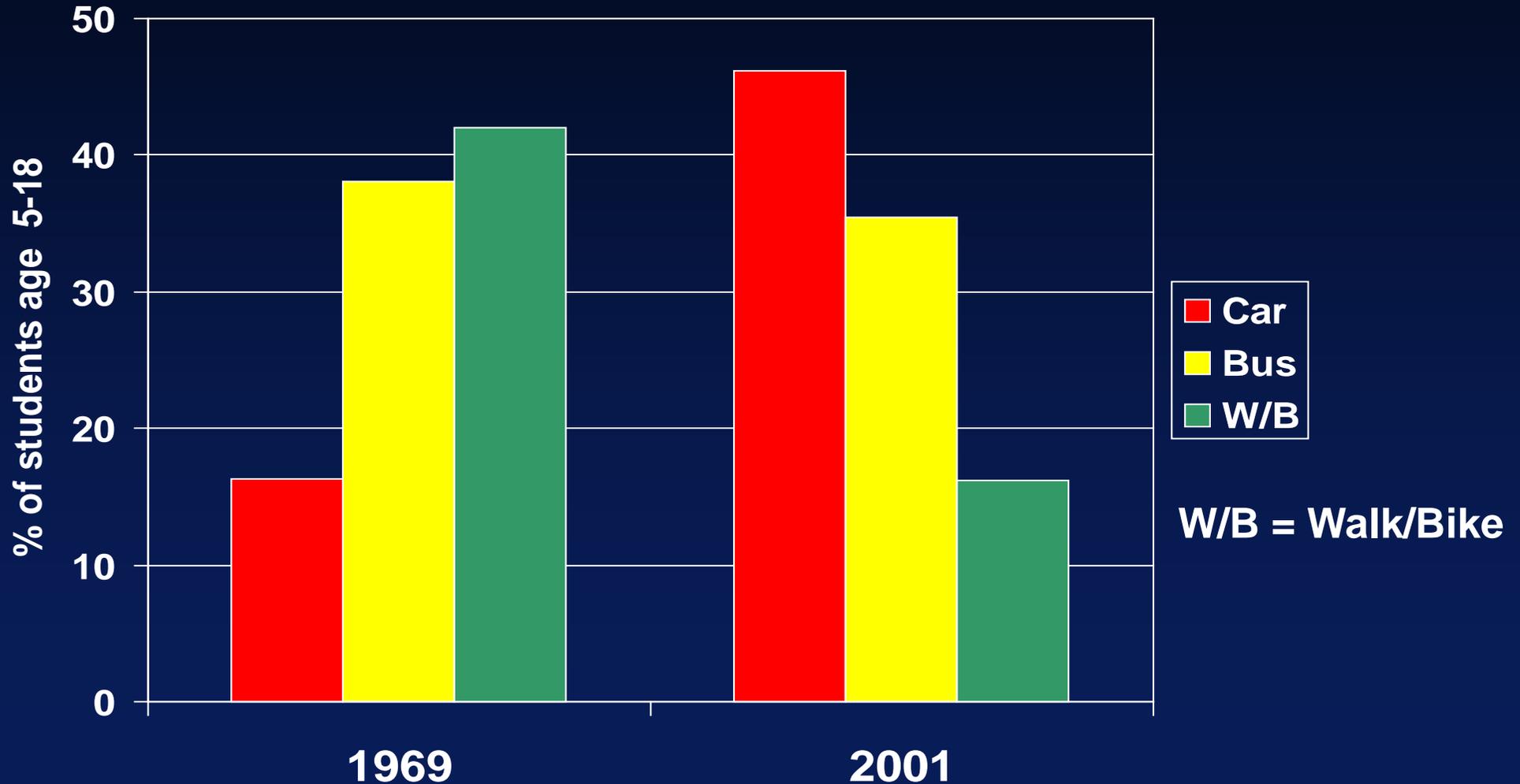


Have your say at [theaustralian.com.au](http://theaustralian.com.au)

The Australian, 14-Oct-2009

# Changes in Walking & Cycling to School, 1969 to 2001

Ham et.al., *Jour. of Physical Activity & Health*, 2008, 5, 205-215



# Trends in Childhood Obesity & Overweight

- 2–5 Years of Age
- 6–11 Years of Age
- 12–19 Years of Age



CDC, National Center for Health Statistics. *National Health Examination Surveys (NHANES) II (ages 6–11) and III (ages 12–17), and NHANES I, II and III, and 1999–2006.*

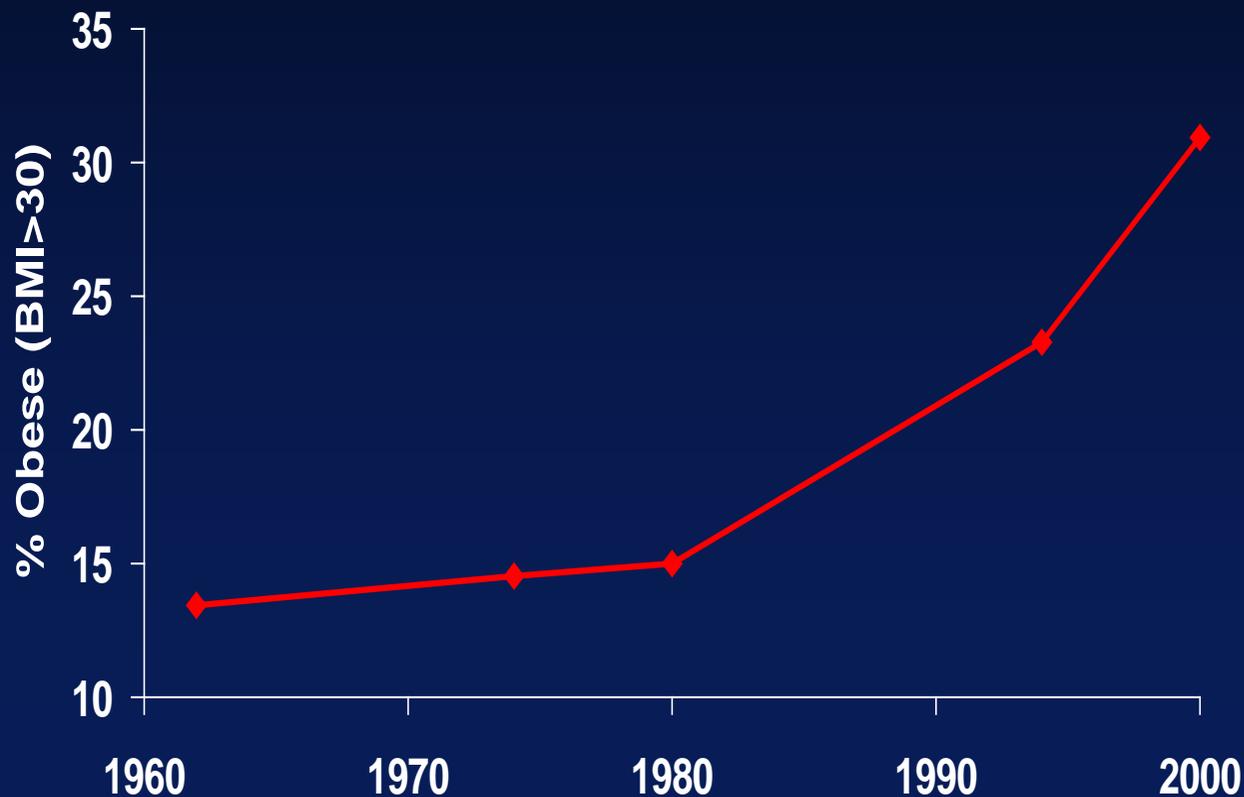
[www.rwjf.org/files/publications/annual/2008/year-in-review/](http://www.rwjf.org/files/publications/annual/2008/year-in-review/)

[www.markfenton.com](http://www.markfenton.com)

# America's looming chronic disease apocalypse . . .

## US "Obesity Epidemic"

Ogden et. al. (JAMA 288, 14; Oct. 2002)



## **My Rant:**

**Change our thinking. It's *not* just an obesity epidemic. It's twin epidemics of **physical inactivity** and **poor nutrition**.\***

**\* Two of the three biggest drivers of skyrocketing healthcare costs.**

# The bad news in just three numbers:

**30** Minutes of daily physical activity recommended (**60** min. for youth).

**20** % of American adults actually meet these recommendation (thru LTPA).

**365,000** Estimated annual deaths in America due to physical inactivity & poor nutrition. (2<sup>nd</sup> only to tobacco.)

# Surgeon General's Report 1996 Physical Activity Guidelines 2008

[www.health.gov/paguidelines](http://www.health.gov/paguidelines)

- **150 min/week** of moderate **physical activity**; more is better.
- Any activity is better than none.
- Can be **broken up**.
- **300 min/week** for children.
- Reduced risk for CVD, diabetes, osteoporosis, dementia in old age, clinical depression, a growing list of cancers, obesity.

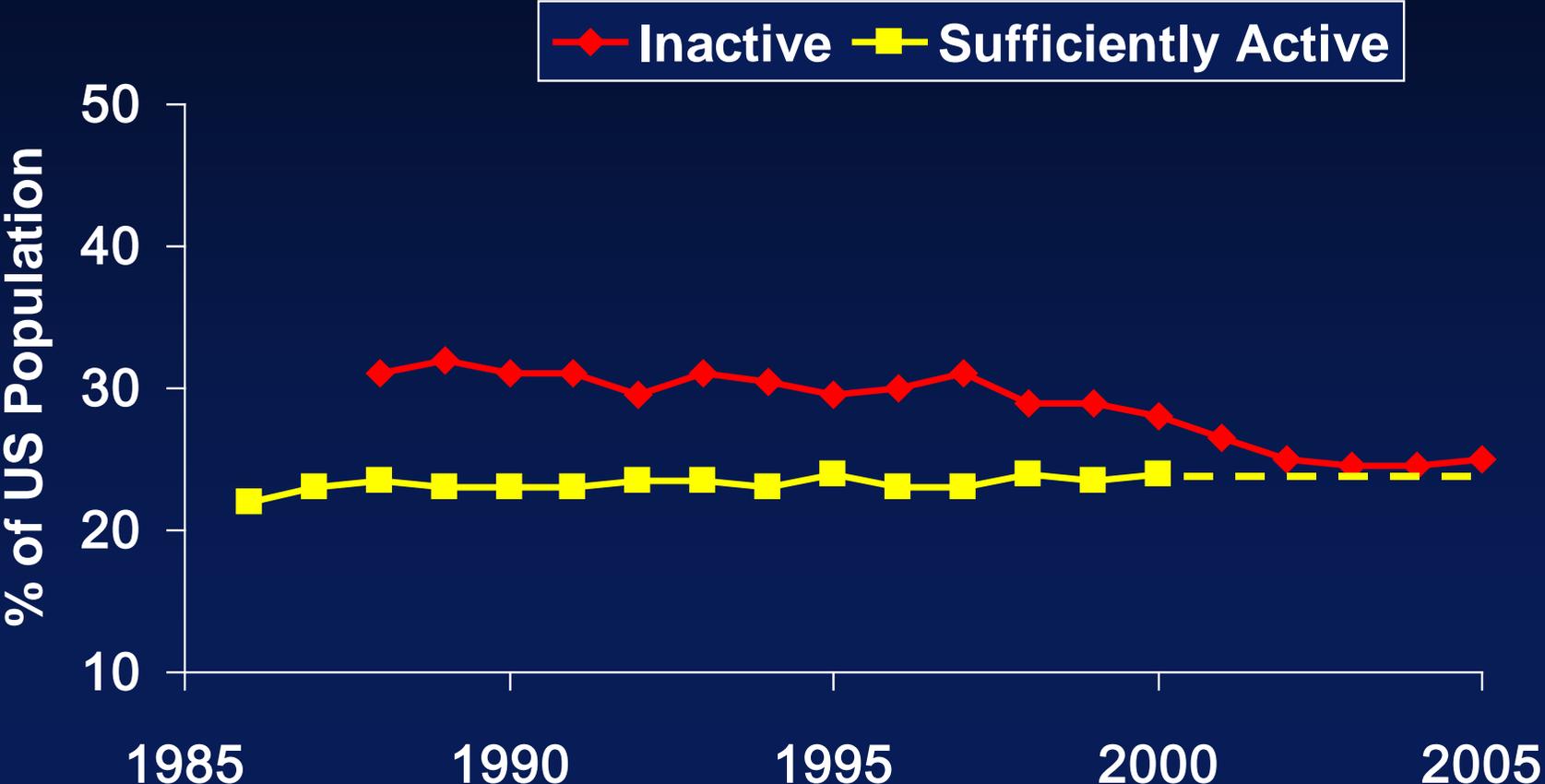


**This counts!**

[www.markfenton.com](http://www.markfenton.com)

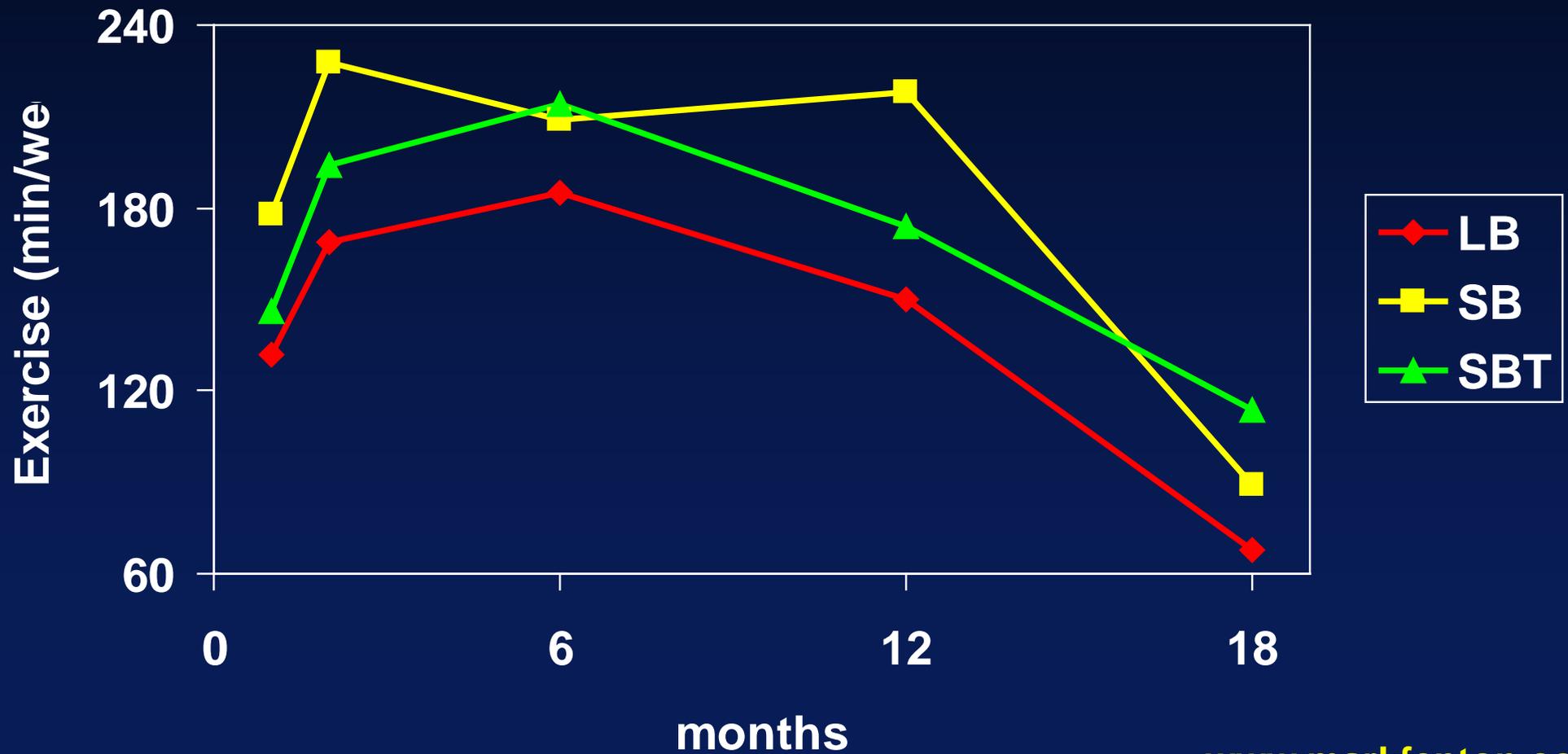
# Leisure Time Physical Activity in the US

(MMWR: 50(09), 166-9; 54(39), 991-4)



# Exercise Participation

Effect of Short Bouts, Home Treadmills  
(Jakicic et.al., *J. Amer. Med. Assoc.*, 282, 16)



## **A realization:**

**Simply telling people to “exercise” & “diet” is not enough. We need to support healthy food system and routine, daily physical activity for everyone.**

# Social Ecology Model

Sallis & Owen,  
*Physical Activity & Behavioral Medicine.*

Determinants  
of behavior  
change

**Individual**  
motivation, skills

**Interpersonal** - family,  
friends, colleagues

**Institutional** - school, work,  
health care & service providers

**Community** - networks, facilities

**Public Policy** - laws, ordinances,  
permitting practices & procedures

**Easier to  
Implement**

**Individual**  
motivation, skills

**Greater  
Impact**

**Interpersonal** - family,  
friends, colleagues

**Institutional** - school, work,  
health care & service providers

**Community** - networks, facilities

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permitting practices & procedures

# Socio-ecological successes?



**Tobacco use**



**Seatbelts, child safety restraints**

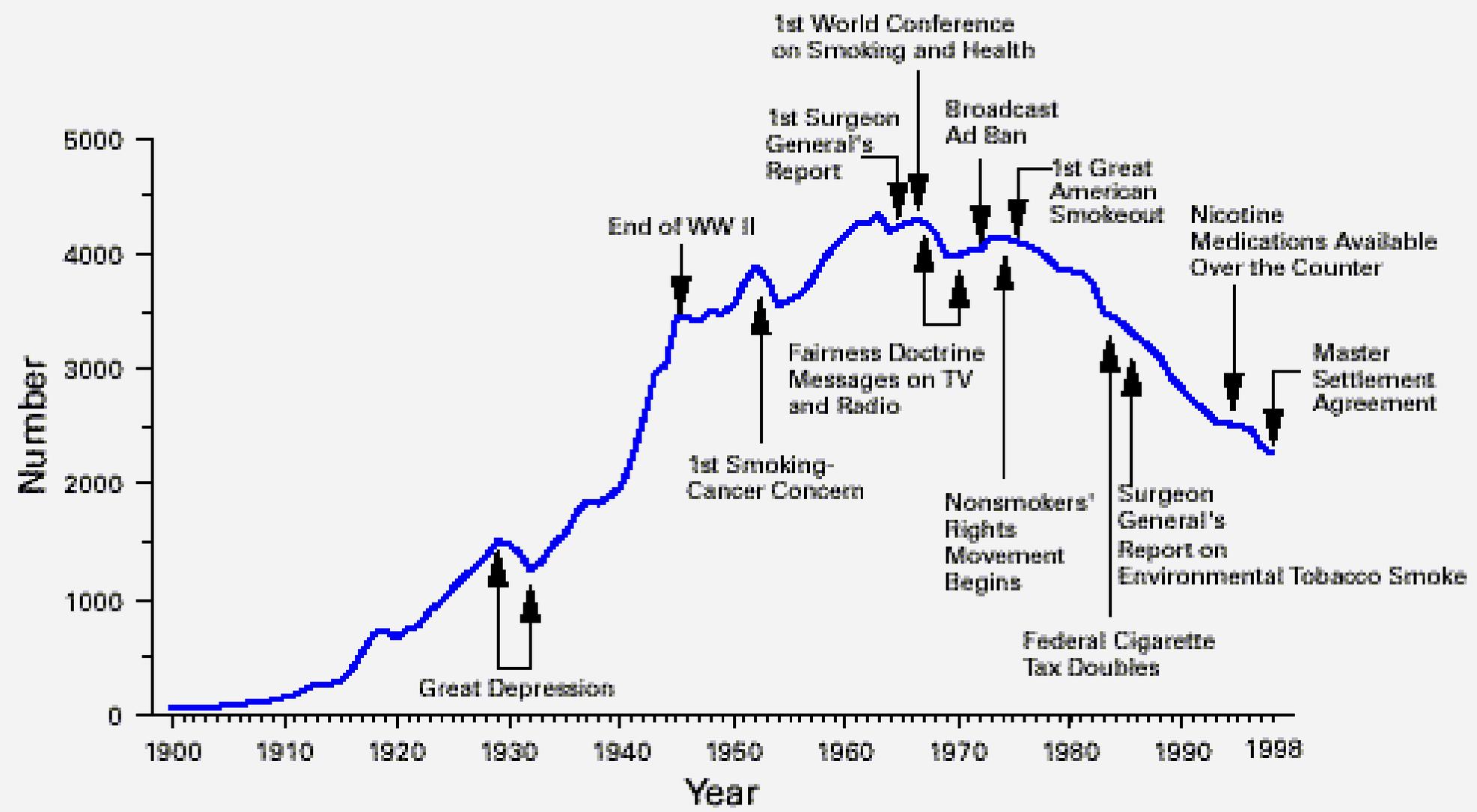


**Water-borne disease**

**Recycling**



**FIGURE 1. Annual adult per capita cigarette consumption and major smoking and health events — United States, 1900–1998**



Sources: United States Department of Agriculture; 1986 Surgeon General's Report.

Thanks to Prof. Ross Brownson, Wash. Univ., St. Louis

[www.markfenton.com](http://www.markfenton.com)



VS.



**Necessary and  
important,  
but not enough. >**



**< We must build  
communities  
where people are  
*intrinsically*  
more active.**



**Belleville**

**If we build it, will  
they come?**

# Yes! 4 key elements:

1. Destinations within walk, bike, & transit distance.
2. Network of sidewalks, trails, bike lanes, transit.
3. Functional, inviting sites for bikes, peds, transit.
4. Safe & accessible for all ages, incomes, abilities.



[www.thecommunityguide.org](http://www.thecommunityguide.org)

CDC Guide to Community Preventive Services

[www.markfenton.com](http://www.markfenton.com)

# 1. Land use.

Live, work, shop, play, learn, pray.



E.g. post office, grocery, schools

Compact neighborhoods & shared open space.

Super Kohl Park, Zeigler

Housing above, retail below.



[www.markfenton.com](http://www.markfenton.com)

## 2. Network encourages active travel with:



- Presence of sidewalks, pathways, bike lanes.
- Shorter blocks, cul-de-sac cut-through.
- Access to park, greenway.
- Quality, reliable *transit*.



# Transit riders are physically active.

Besser, Dannenberg, *Amer. J. Prev. Med.*, 29 (4), Nov. 2005.

## Just during the daily walk to transit:

- Half of transit riders walk at least 19 mins.
- 29% get at least 30 mins. of activity.
- Minorities, poor (income <\$15k/yr.), denser area dwellers more likely to get 30+ mins./day.



# Bicycle network options:



On street



American River Trail  
Sacramento, CA



Shared-use arrow  
Sharrow



Bike lanes

# 3. Site design:



N. Illinois Ave.

Which setting is more appealing for travel on foot and by bike?

# Site design? Research & practice suggest:



Carbondale

- Buildings near the sidewalk, not set back; parking on street or behind.
- Trees, benches, lighting, awnings, “human” scale.
- Details: bike parking, open space, plants, art, materials.



## Possible incentives:

- Decrease, share parking (include bike racks).
- Build-to lines.
- Mixed-use, multi-story, w/ residential density bonus.
- Expedite permits.



Neenah WI

**Elected, appointed officials & staff must be supported if expected to act courageously.**

Appleton WI



# 4. Safety.

- Engineering can dramatically improve safety.
- Increasing pedestrian and bike trips *decreases* overall accident & fatality rates.



Median islands



Roundabout (Neenah, WI)



Curb extensions

(Jacobsen P, *Injury Prevention*, 2003; 9:205-209.)

[www.markfenton.com](http://www.markfenton.com)



SIU campus ^



# E.g. Lane re-alignments

- Often called road diets, reduce 4 or 5 lanes to 3.



Urbana; before & after.



- Can reduce collisions & severity.
- Dramatic improvement for pedestrians & bicyclists.

# 5. Community design & food systems?

- Community gardens (near schools, parks, senior housing)
- Zoning for urban farming; chickens, bees, compost . . .



- Regulate fast food, drive-through locations.



- Farmer's markets; accepting EBT/WIC
- Green grocers.
- Neighborhood stores.

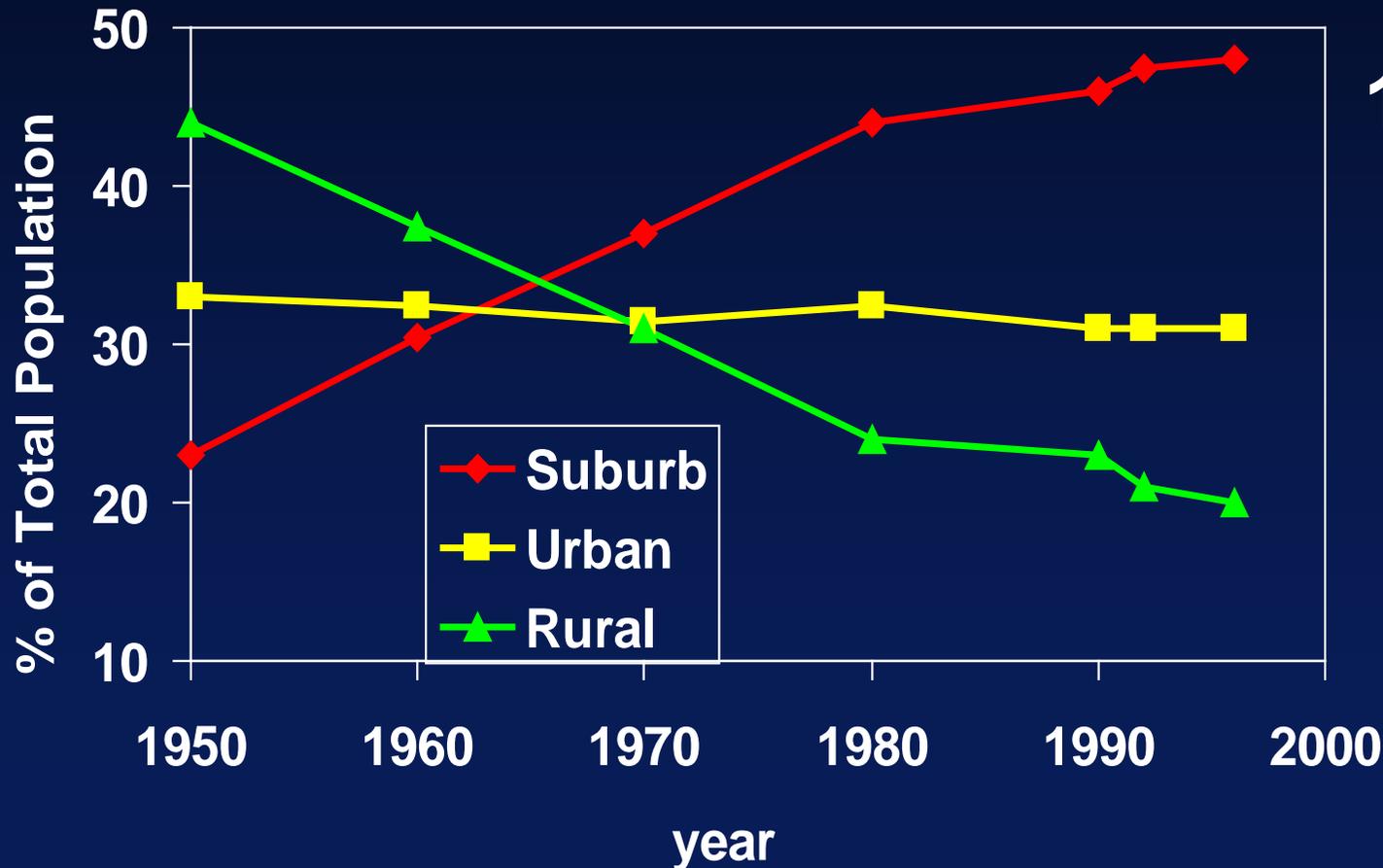


# “But what about rural areas . . . ?”

## Suburbanization of America

### US population shift, 1950-1996

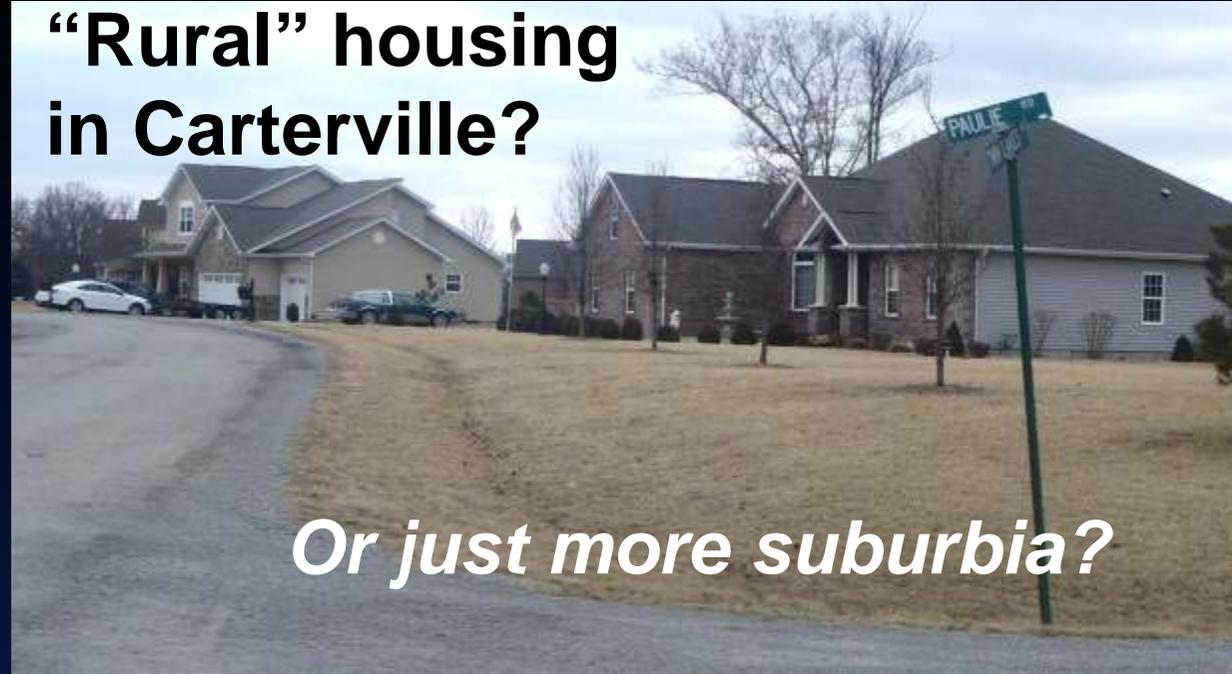
(after *Bowling Alone*, R. Putnam, 2000)



1. Suburbia is steadily consuming the landscape . . .

2. Rural areas are  
where you can  
affect the shape of  
development  
*before it's done!*

“Rural” housing  
in Cartersville?



*Or just more suburbia?*



**Elementary school**

**No path,  
sidewalk,  
connector!**



# Five Elements of Healthy Community Design:



Ped, bike,  
& transit  
network



Healthy affordable  
food



Safety &  
access



[www.activelivingresearch.org](http://www.activelivingresearch.org)

[www.markfenton.com](http://www.markfenton.com)

**Shouldn't the free market  
dictate how we build our  
cities & towns?**

# Internalize external costs.

## Environmental:

- Reduced traffic; air, water, & noise pollution.



## Safety:

- Kids, elderly mobility.
- Crime deterrent.



## Social:

- Equitable transportation.
- More personal connections.

## Education, schools:

- Student health, safety.
- Behavior & performance!
- Transportation costs.
- Community engagement; schools as neighborhood centers.

# Economics. *Walking the Walk:* *How Walkability Raises Housing Values in* *U.S. Cities* (CEOs for Cities report)\*

Twin Lakes, Carterville



Cherry St., Carbondale



Higher score = ↑ \$4,000-\$34,000 home value

\*[www.ceosforcities.org/work/walkingthewalk](http://www.ceosforcities.org/work/walkingthewalk)

[www.walkscore.com](http://www.walkscore.com)

[www.markfenton.com](http://www.markfenton.com)

# ***On Common Ground***

**Nat'l Assoc. of Realtors pub.; Summer 2010**

**[www.realtor.org](http://www.realtor.org)**

## **The Next Generation of Home Buyers:**

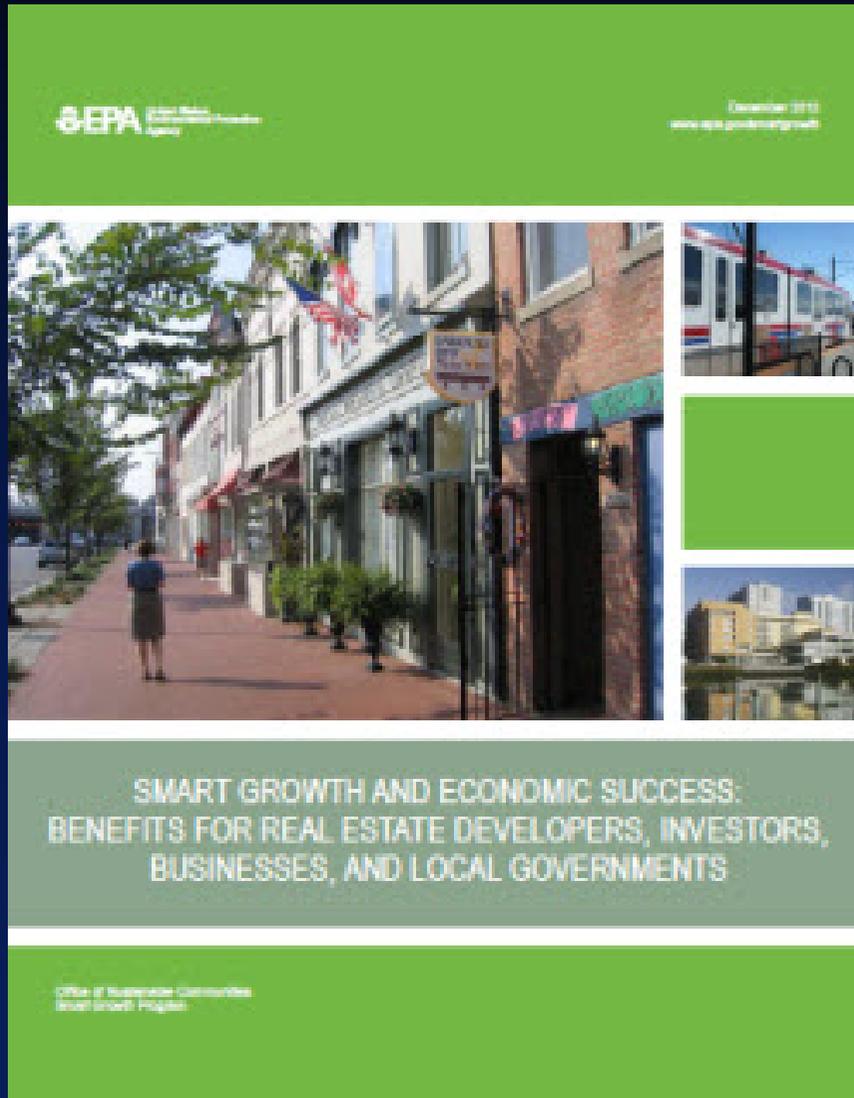
- **Taste for in-town living.**
- **Appetite for public transportation.**
- **Strong green streak.**
- **Plus, Americans are driving less overall!**



# Smart Growth & Economic Success

[www.epa.gov/smartgrowth/economic\\_success.htm](http://www.epa.gov/smartgrowth/economic_success.htm)

Dec. 2012



- Less infrastructure, less land, lower cost.
- Faster path to permit.
- More appealing to customers; faster sales.

Once constructed . . .

- More travel options to retail; better access.
- Better customer capture.

[www.markfenton.com](http://www.markfenton.com)

# What's happening?

- 1<sup>st</sup> & 2<sup>nd</sup> generation malls & big boxes are struggling.
- Employers seek vibrant, livable communities, where employee health, satisfaction, & retention are high!



**Or more simply:**  
Which generates more economic activity, a dying mall or thriving downtown?

# Retrofitting malls & big box complexes.



- Increase density.
- Add residential, offices, pocket parks.
- Create parking boulevards.



# So how to get there?

(Can we really do this?)



# Build a compact, focused, interdisciplinary leadership team targeting healthy design:

- Education, schools
- Planning & Zoning
- Engineering, DPW
- Parks, Recreation
- Public Health & Safety
- Historical preservation
- Social justice & equity
- Chamber of Commerce
- Developers, Lenders, Realtors
- Neighborhood Assoc., Church & Service Groups
- Environment, Conservation

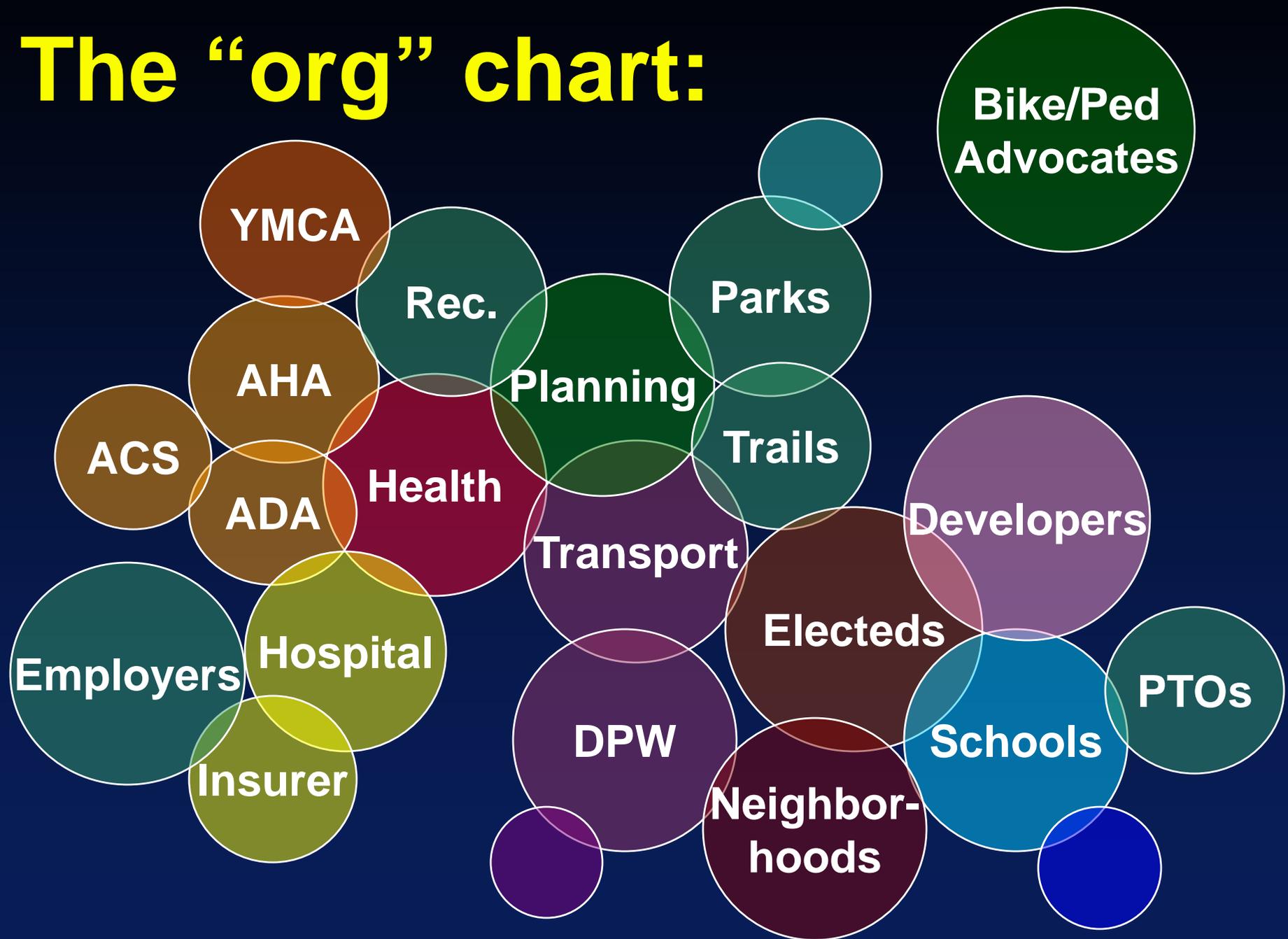


## Policy information:

[www.lgc.org](http://www.lgc.org)

[www.vtppi.org](http://www.vtppi.org)

# The "org" chart:





# To be on the stealth leadership team people must:

- Fully embrace the **vision** of active, healthy community design.
- Be able to spend time on this as part of **job responsibilities**; not just volunteers.
- Have **community influence** and be able to **reach** critical partners.

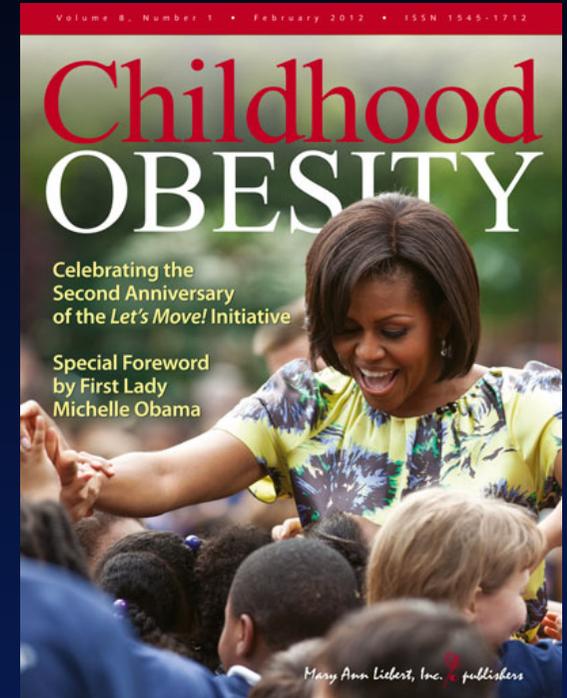


Tunnel Hill Trail

# Procedures & policies, not programs.

Fenton, Community Design . . . , *Childhood Obesity*, 8(1); Feb 2012.

- Planning, **zoning**, & **subdivision ordinances** for mixed use, open space.
- **Complete streets** guidelines & routine practice.
- Transportation **trail networks**.
- Bicycle & transit infrastructure & incentives; Transportation Demand Management (**TDM**).
- **Schools as centers of Community Health**; systematic Safe Routes to School.



# 1. Plans & zoning policies.

- Use Main Streets & compact neighborhoods as a guide.
- Density bonuses: corner stores, affordability, infrastructure improvements.
- Residential clusters in centers, near transit.
- Require *multi-modal transportation* analysis.



**Act NOW, before the boom!**

# Build subdivision guidelines to mimic the village-style grid.



Developers like density;  
can support transit, boosts affordable units.

**Once you have a plan, you can do projects when they're "cheap"**

**Routine accommodation during painting, paving.**



**Opportunistic improvements.**

# Require not just *traffic*, but *multi-modal transportation* analysis for all development.



Rt 13, at Jackson Co. Health offices

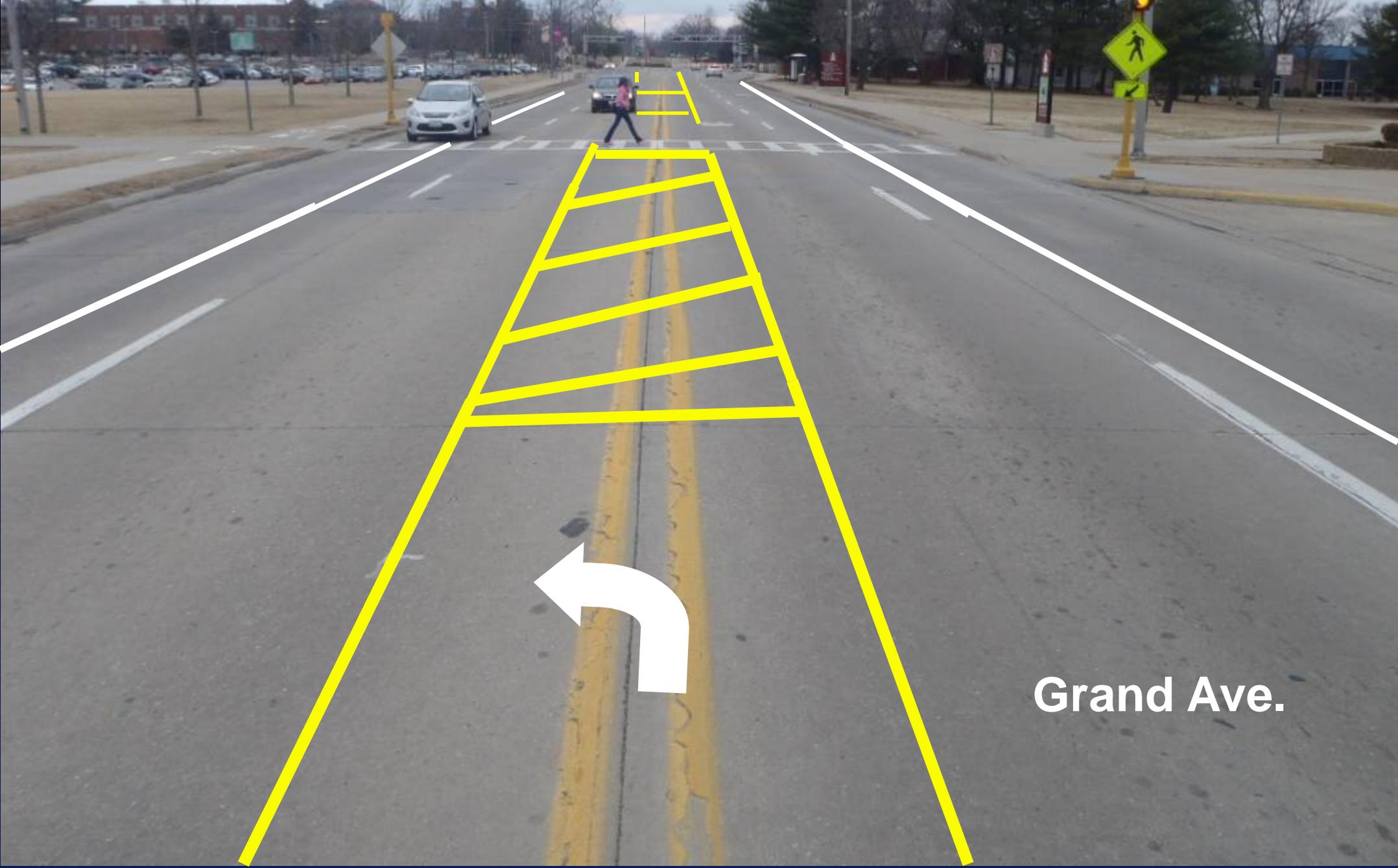


Mitigation = transit, bike, & pedestrian facilities, possibly systemic rather than on site.

## 2. Build Complete Streets into ordinance:

- All users (pedestrians, cyclists, transit riders, & drivers) of all ages & abilities considered in every road project (new, repair, maintenance).
- Start w/ resolution (*whereas . . . Be it resolved . . .*)
- Incorporate during **routine painting, paving, maintenance, utility work!**





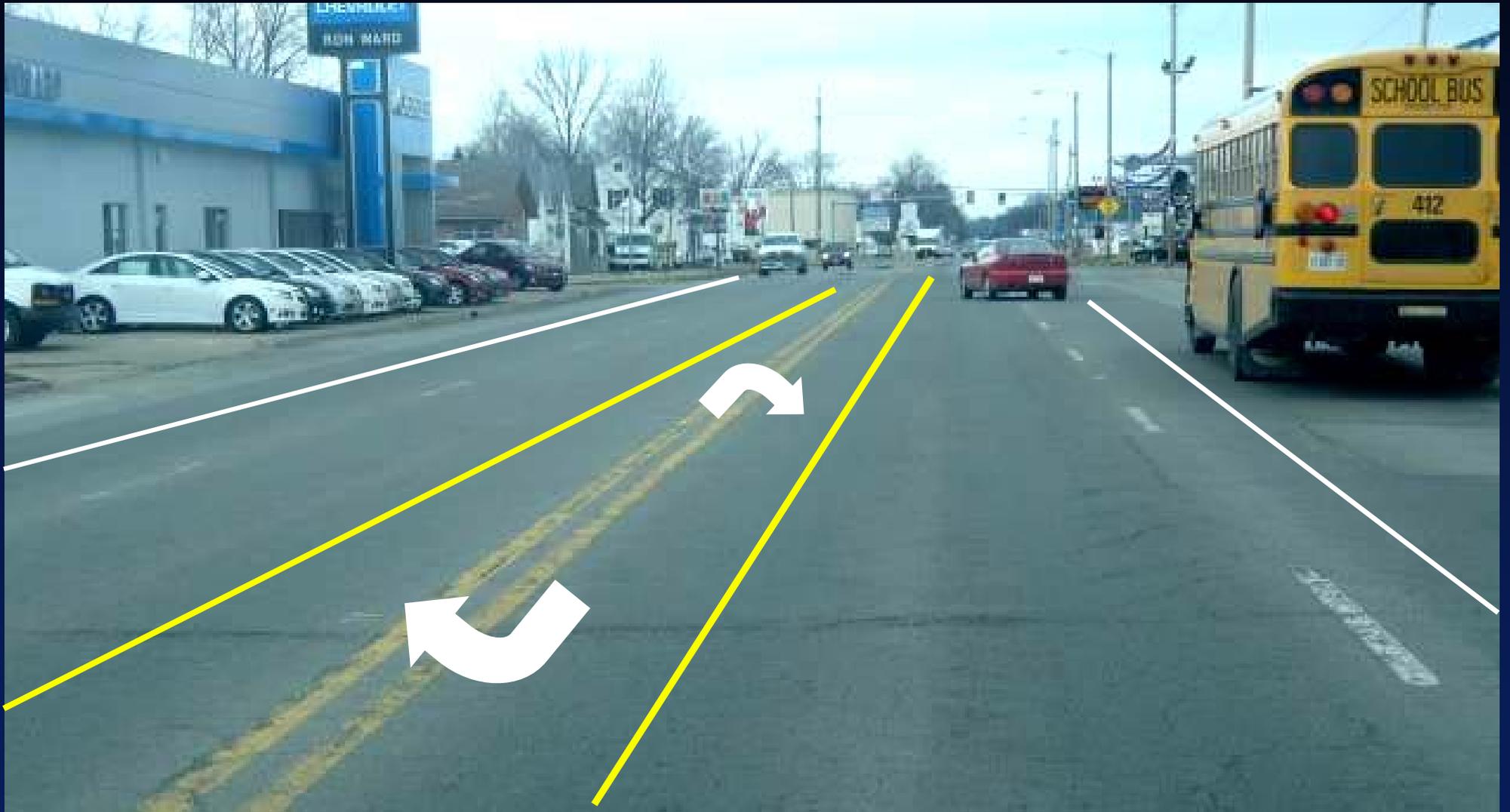
**Grand Ave.**



**Grand Ave.!**

# Main Streets that are state highways . . .

E.g. downtown Herrin.





**Typical rural routes**



**Pave the shoulder?  
Move the line?**

# 3. Develop a comprehensive network of *transportation* trails.

- **Connect** to other elements of transport network (e.g. sidewalks, bike lanes, transit stops)
- Focus on **destinations** (e.g. schools, shopping, parks, senior housing).
- Build into the **fabric of the community.**



**Herrin sports complex**



**Housing right next door . . .**





**Someone is  
not satisfied!**

## 4. Institutionalize transit support & transportation demand management.

- Connect **transit**: rail, bus, dial-a-ride, school bus.
- Institutionalize: IDs as **transit passes**, tie to wellness programs!
- Start w/ colleges, city employees, hospitals . . .
- **Less parking** not more!



- Buses: costs, coverage, time, frequency(?)

# Survey & map nearby walk & bike destinations.



Employers to provide “loaner” bike fleets.



# Get “bicycle-friendly” ratings . . .

- Universities, businesses, & communities.
- Bike lanes, sharrows.
- Bike parking: schools, library, businesses.
- Maps, way-finding.
- Promotion & enforcement.
- Bike sharing; skills & safety education. >

[www.bikeleague.org](http://www.bikeleague.org)



Special event bike parking.



Blue Island  
Bike Club  
[bibc.us](http://bibc.us)

[www.markfenton.com](http://www.markfenton.com)

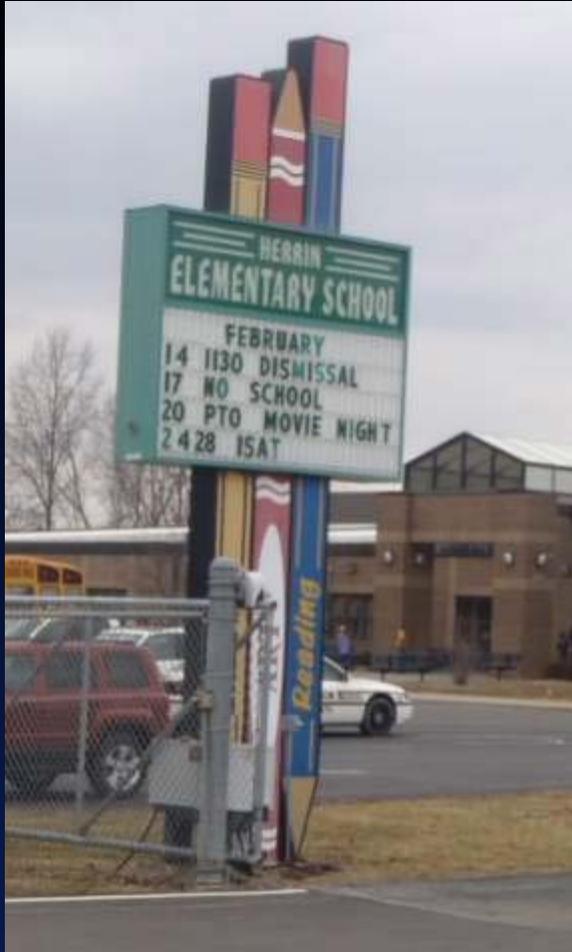
# 5. Comprehensive Safe Routes to School

- **Keys:** Location, grade centered?
- **Evaluate** where kids come from, by what mode, & why.
- **Engineer** safer routes.
- **Educate & encourage** safer, healthy behavior.
- **Enforce** proper speeds, procedures for all.

[www.saferoutesinfo.org](http://www.saferoutesinfo.org)



[www.markfenton.com](http://www.markfenton.com)



Herrin  
Elementary  
dismissal  
line . . .



# E.g. Remote pick-up/drop-off areas.

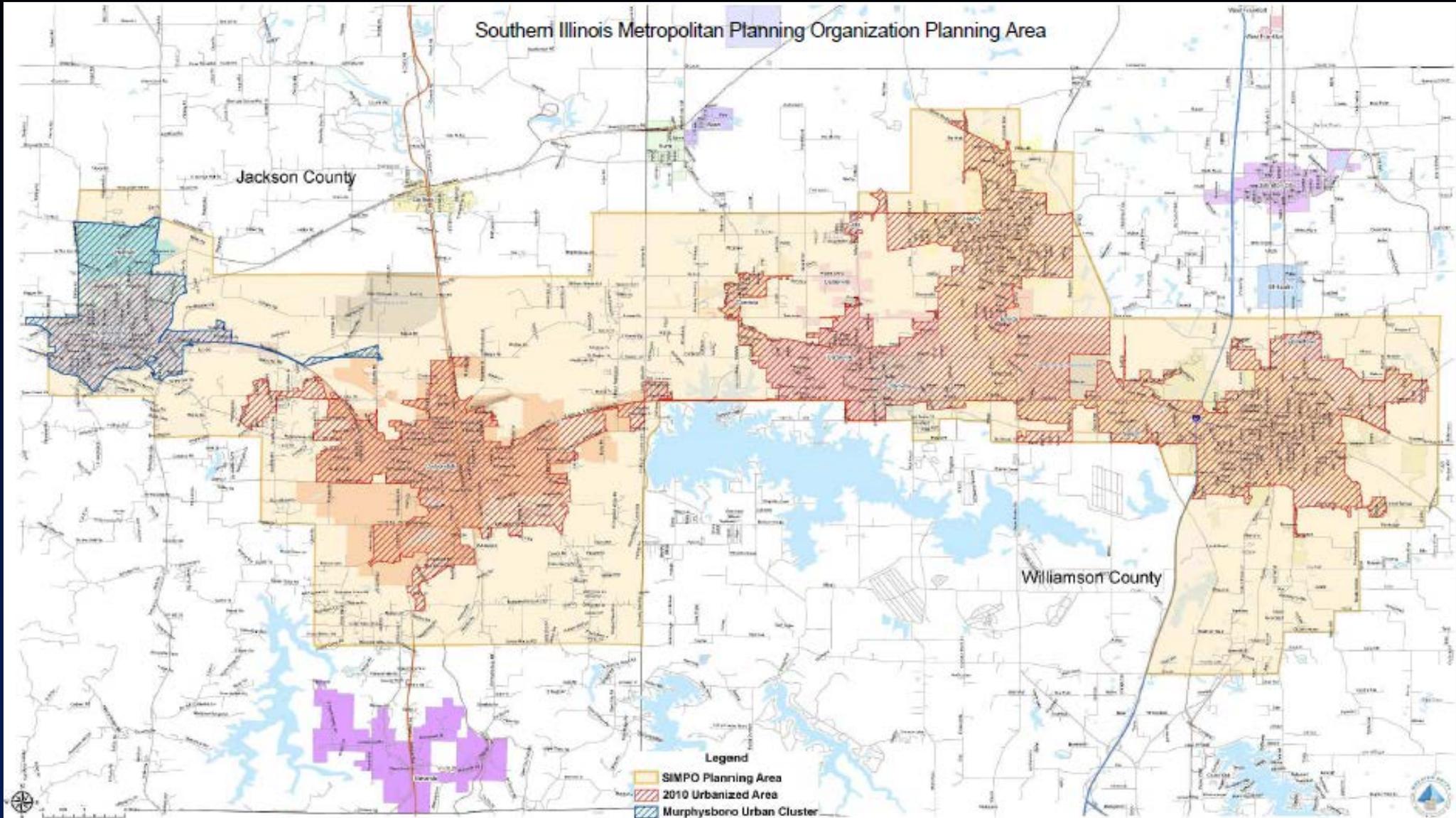
- **Program.** Walking school busses, bicycle trains . . .
- **Project.** Construct remote drop-off in adjacent park.
- **Policy:** Relocate bus/car drop-off/pick-up to park; **5 min. car safety delay** to let ped, bike, bus riders clear.



Columbia, MO



# Southern Illinois Metropolitan Planning Organization Planning Area



**Southern Illinois Metropolitan Planning Org.:**  
**[www.greateregypt.org/SIMPO](http://www.greateregypt.org/SIMPO)**

[www.markfenton.com](http://www.markfenton.com)

# Develop Active Transportation Plans

Region, counties, towns.

1. Learn;
2. Walk;
3. Solve;
4. Commit



E.g. SIU students in health, geography, engineering, public policy, sustainability . . .



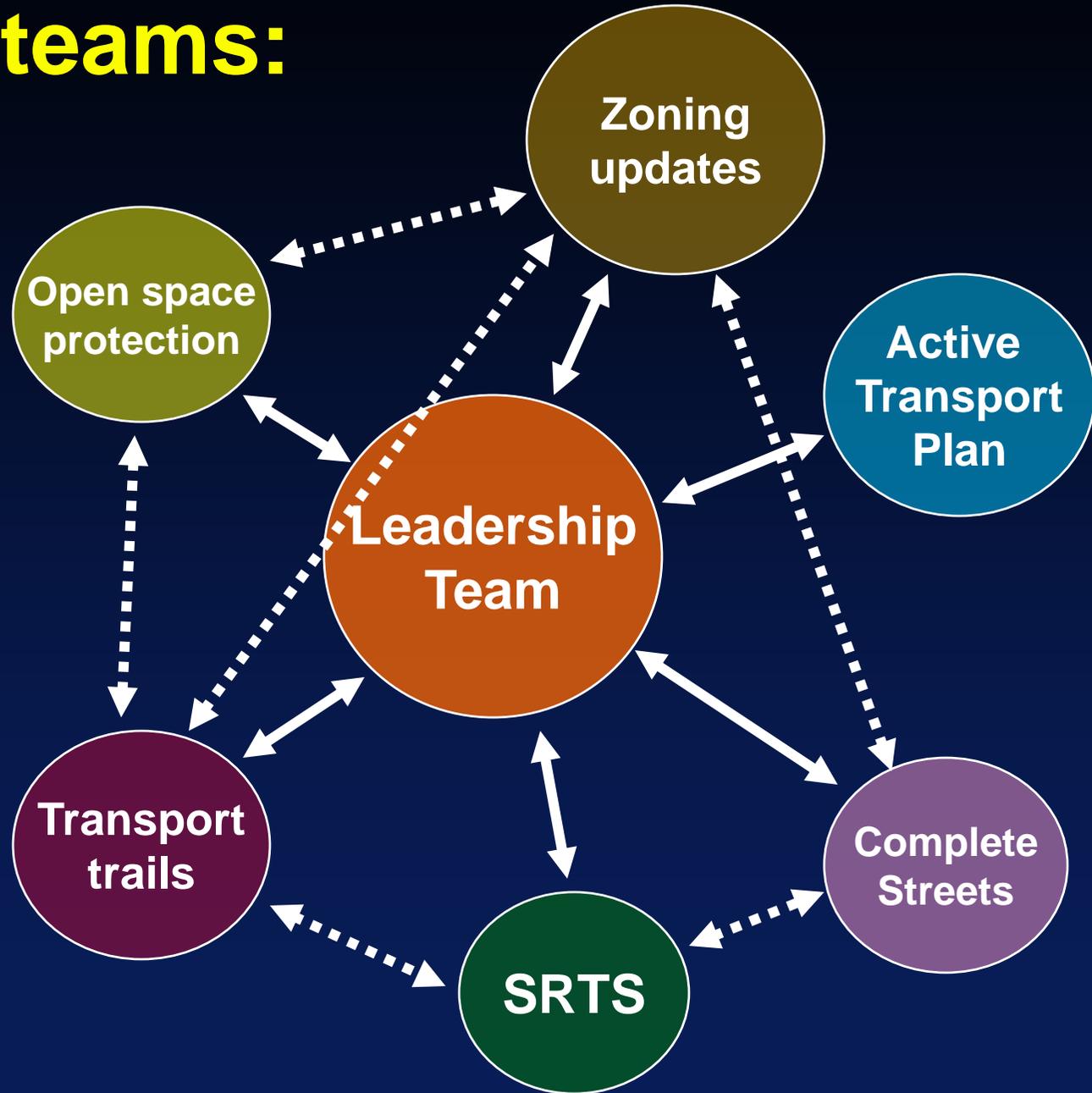
**Group problem solving with citizens & professionals is central to success.**



**Walkable & Livable  
Communities Institute:  
[www.walklive.org](http://www.walklive.org)**

# Create action teams:

- Small, strong, well-connected leadership team.
- Tight, focused action teams on specific topics.
- No monthly meetings, just functionally targeted work.



# My final, editorial thought:

- It's not really about building sidewalks & painting bicycle lanes & crosswalks.
- It's about building the **capacity** and the **policies** to create these everywhere.
- It's never really about the *money*.
- It's about the long term **vision** and the **political** and **community will** to make it a reality.

**VISION**

**LEADERSHIP**

# Why care about stickiness & active community design?

- The **inactivity** epidemic; **our kids may pay!**
- **Quality of life**; safety & comfort; **social equity.**
- **~4,000** pedestrian, **~40,000** motor vehicle, **~400,000** sedentary-related deaths/year.
- **Greenhouse gasses**, over an hour of average commute time/day, traffic congestion and costs.
- OPEC; drilling in **ANWR**; **oil wars** in Mid-east.
- More eyes on the street, **less crime.**
- Shopping locally, healthier **housing values.**
- Higher employee retention, higher productivity, **lower health care costs.**

**Olshansky et.al., “A  
Potential Decline in Life  
Expectancy . . .”**

***New Eng. J. of Med.,  
March 17, 2005***



# 10 minute thought exercise:

- **1 min:** Introductions, who's at your table.
- **4 mins:** Whip around the table; each person quickly a concrete action item.
- **4 mins:** Look for themes, build consensus.
- **1 mins:** Summarize, selecting a
  - **First** action step to start concrete progress.
  - **Highest impact** action step; this will really matter
  - **Most interesting** or controversial action step.

# Example

**Goal:** Improve the city's sidewalk network.

- **First:** Create a real inventory. Get school kids & service groups out to assess sidewalks (none, poor, sufficient). Partner w/ college students to map; priorities w/ destinations. [12 mos.]
- **High impact:** Pursue myriad funders to create sidewalk endowment; interest supports specific construction amount each year. [24 mos.]
- **Controversial:** Property owners to pick up portion of cost; even absentee landlords. [Start: 30 mos.]

(Include who, how, and by when . . . )

# Report out:

- **Share three ideas with the group:**
  - The first action step that you feel must be taken in your area.
  - Most critical or high impact action step; will make the most difference.
  - Most exciting, surprising, or even controversial action idea your table discussed.