

Creating a Healthier Community by Design

—

Healthy Community
Forum

Westford, MA

Sep 2015



A small sign of hope?
Nabnasset School



And this?

Common challenges to “healthy design:”

- Isn't health a result of **personal decisions & habits?**
- Even if we build it, **will they come?**
- Shouldn't the **free market** dictate how we build our cities & towns?
- Fine, but what about **cost?** And the **technical details?**



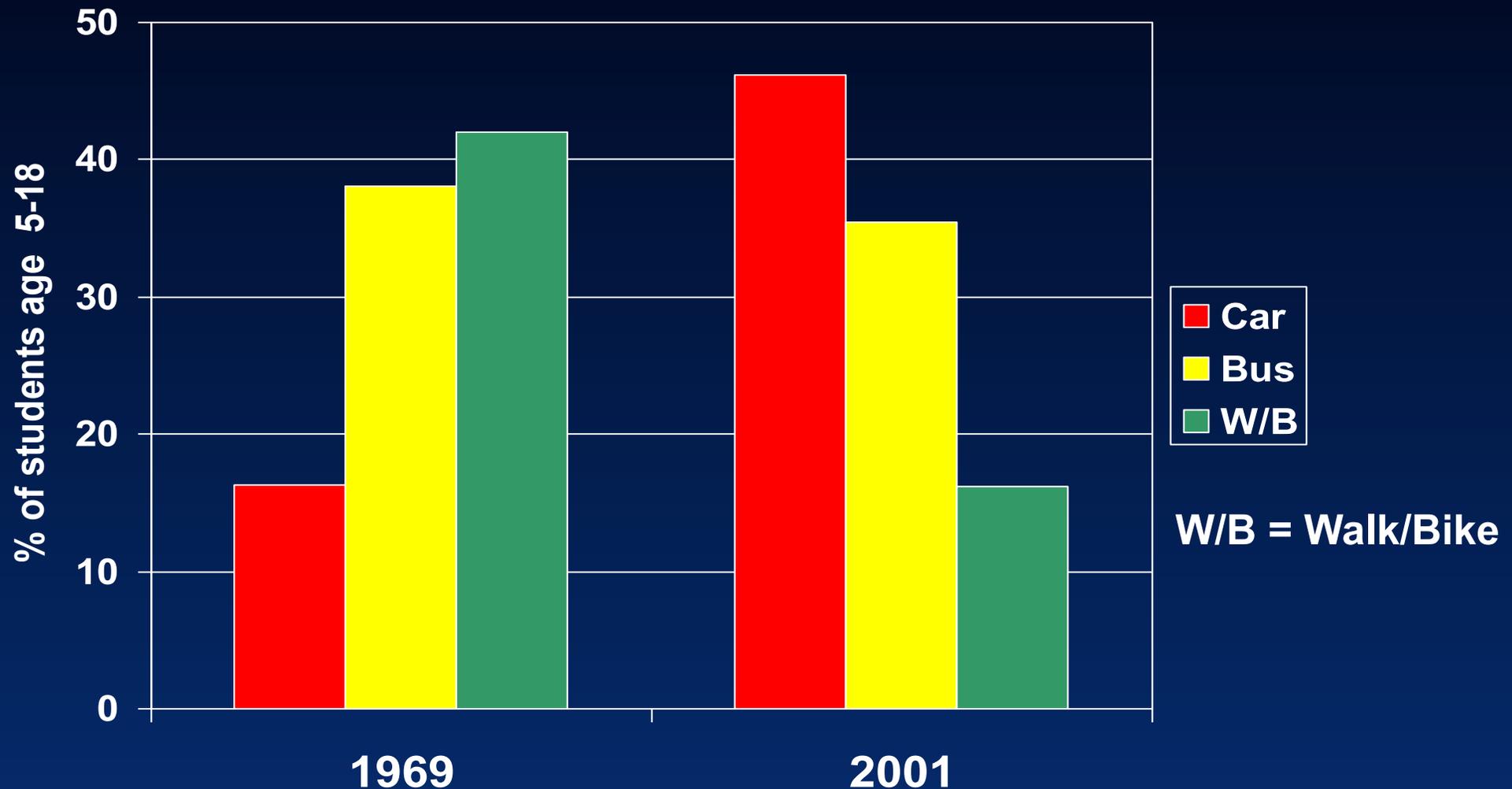
Near Abbot Mill

Youthful recollections



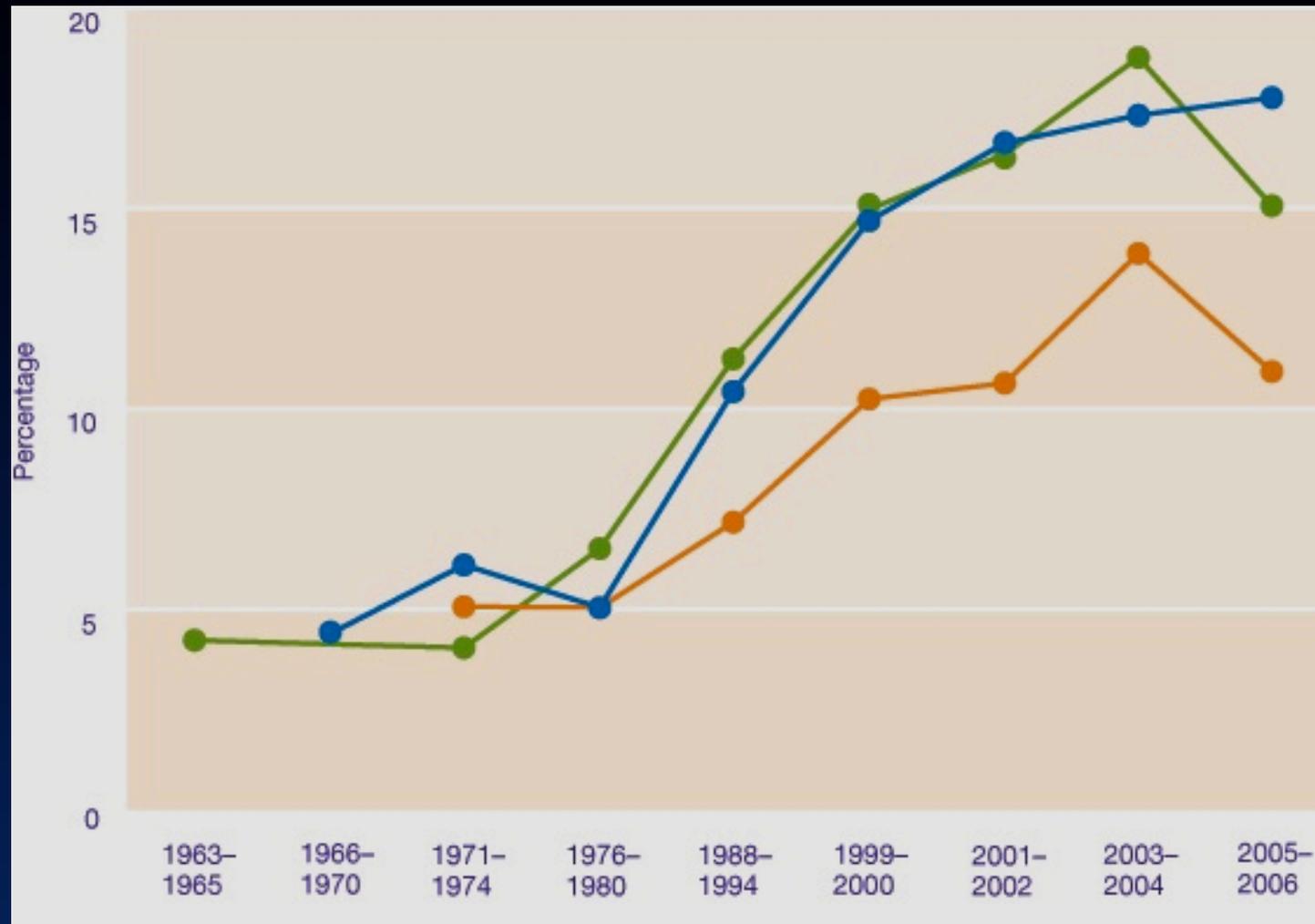
Changes in Walking & Cycling to School, 1969 to 2001

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 & Nutrition Surveys (NHANES).

www.rwjf.org/files/publications/annual/2008/year-in-review/



The big
risk they
face . . .



Step one:

Evolve 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** mins. for youth).

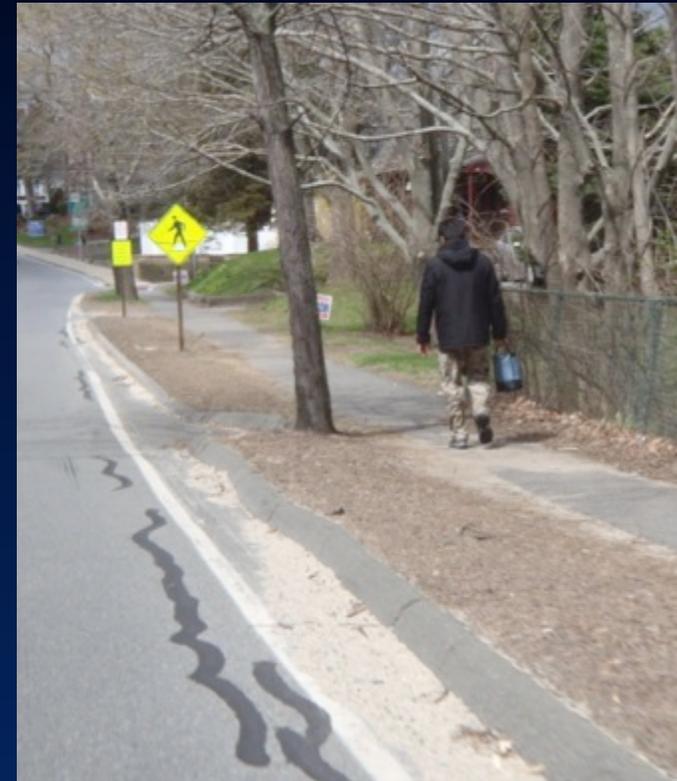
< **20** % of American actually meet these recommendations (thru LTPA).

365,000 estimated annual deaths in America due to physical inactivity & poor nutrition. (2nd only to tobacco.)

Surgeon General's Report 1996 Physical Activity Guidelines 2008

www.health.gov/paguidelines

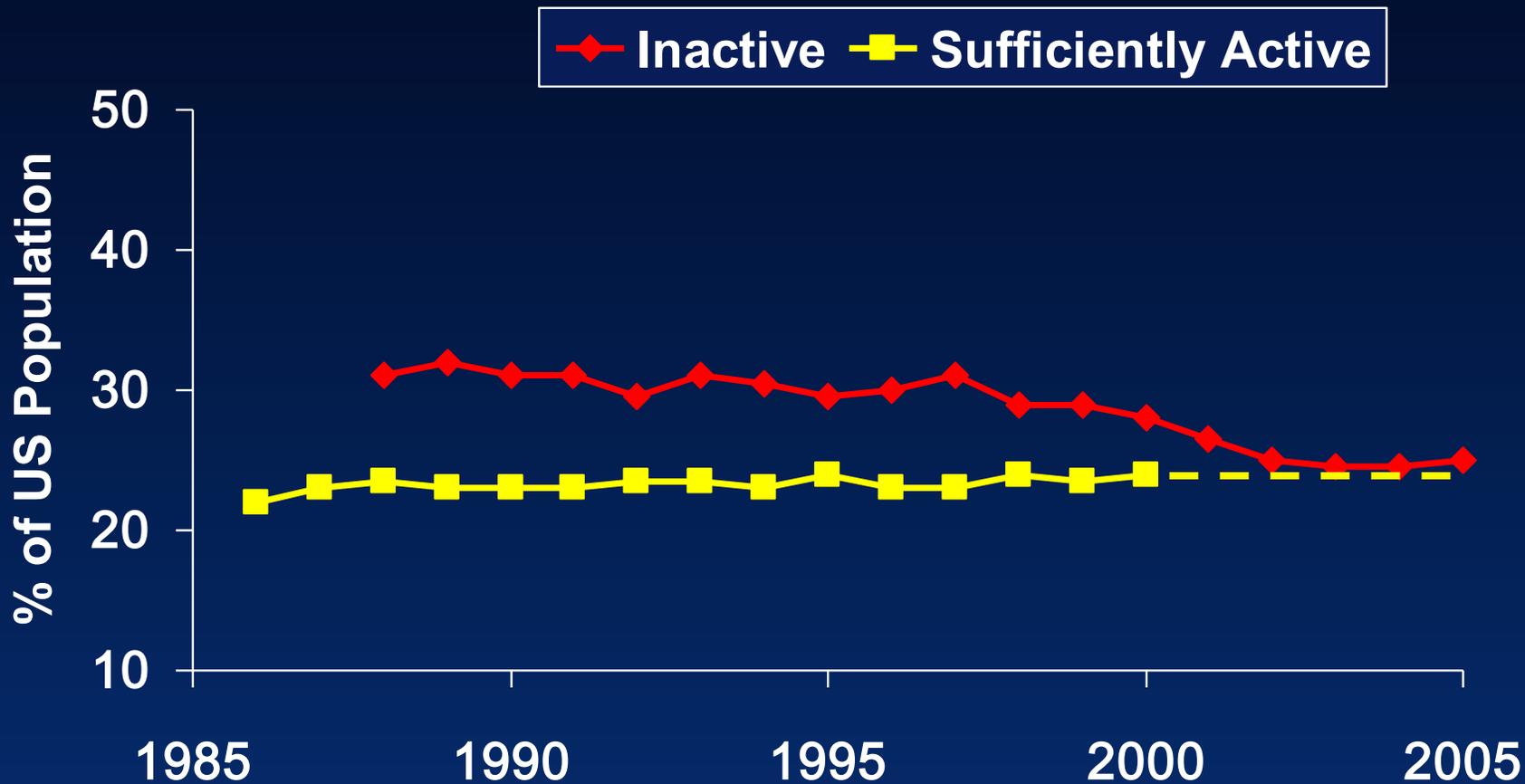
- **150 min/week** of moderate **physical activity**; more is better.
- Any activity is better than none.
- Can be **broken up**.
- **300 min/week** for children.
- Reduced risk for CVD, diabetes, osteoporosis, obesity, dementia in old age, clinical depression, a growing list of cancers . . .



This counts!

Leisure Time Physical Activity in the US

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

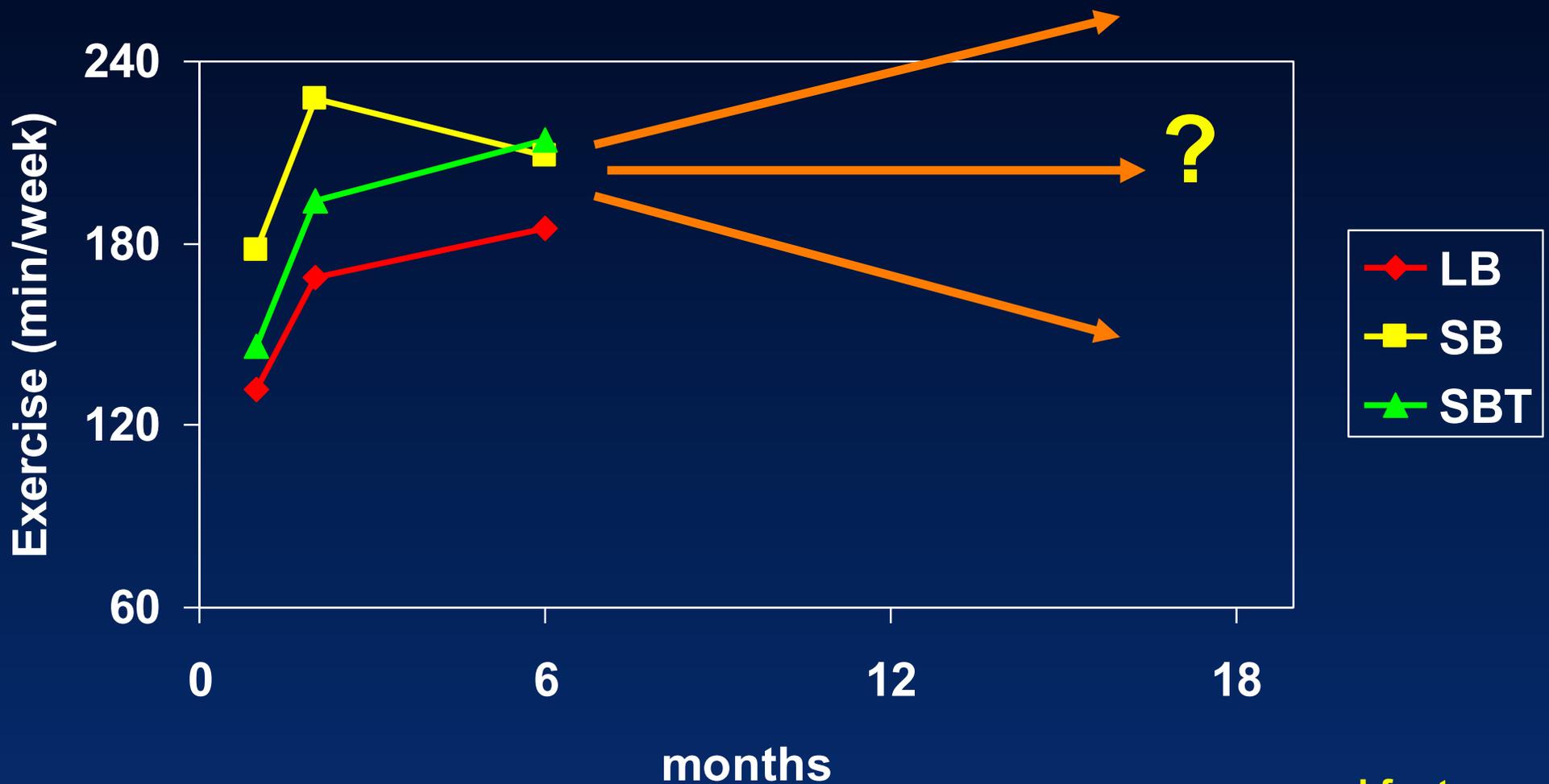


**Why is it so resistant
to change?**

**I believe in large part the
stickiness problem!**

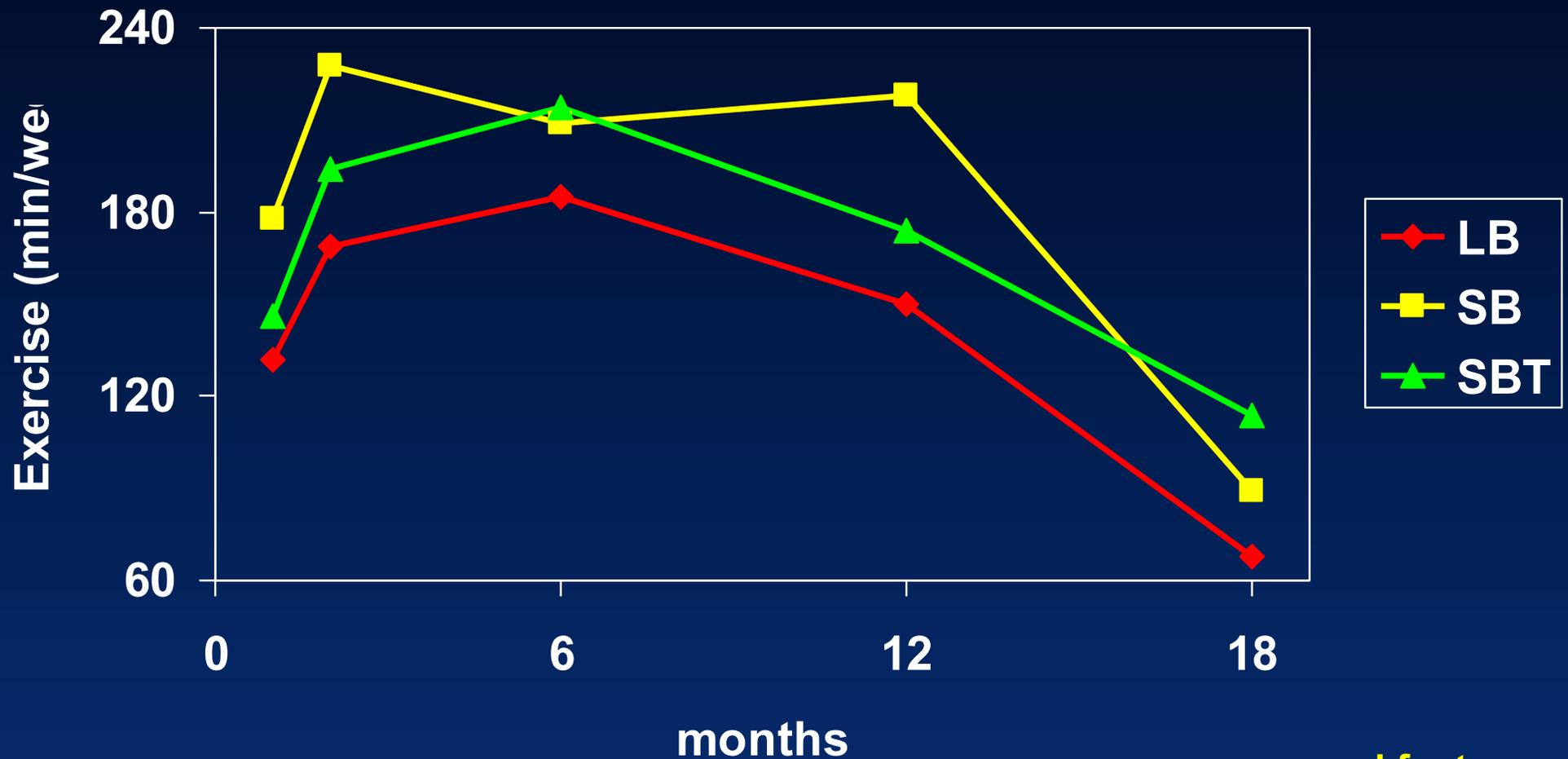
Exercise Participation

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



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A realization:

Simply telling people to
“exercise” is not enough. We
need to support increases in
**routine, daily physical
activity for everyone.**

Social Ecology Model

Sallis & Owen,
Physical Activity & Behavioral Medicine.

Determinants
of behavior
change



Socio-ecological successes?



Tobacco use

Seatbelts, child safety restraints



Water-borne disease

Recycling



Haiti



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



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



If we build it will they come?

**(Does the built environment
really matter?)**

YES! Four things . . .

1. Variety of uses within walk, bike, & transit distance.
2. Network: sidewalks, trails, bike lanes, transit.
3. Site designs are functional & inviting for pedestrians, bicyclists, & transit users.
4. Safe & accessible for all ages, incomes, abilities



1. Land use. Live, work, shop, play, learn, pray.



E.g. post office, grocery, schools

Compact neighborhoods
& shared open space.



Housing
above,
retail
below.



2. Network is more complete with:



- Presence of sidewalks, bike lanes, pathways.
- Shorter blocks, cul-de-sac connectors.
- Access to quality, affordable *transit*. >



Bicycle network options:



Sharrows

Multi-use trail



Protected bicycle lanes



Bicycle lanes

3. Site Design:



Which setting is more inviting for travel on foot or by bicycle?

Site design? Research & practice suggest:



Westford

- 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, not set-back requirements.
- Expedite permits.



Neenah, WI



Appleton, WI

Elected, appointed officials & staff must be supported if expected to act with vision & courage!

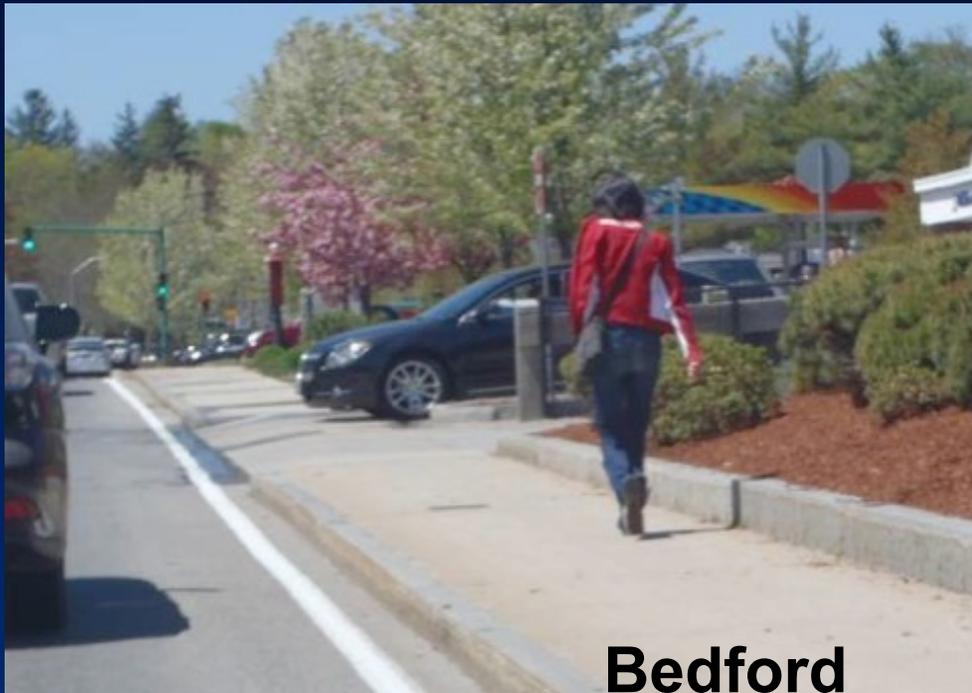
Comfortable settings for drivers and pedestrians?



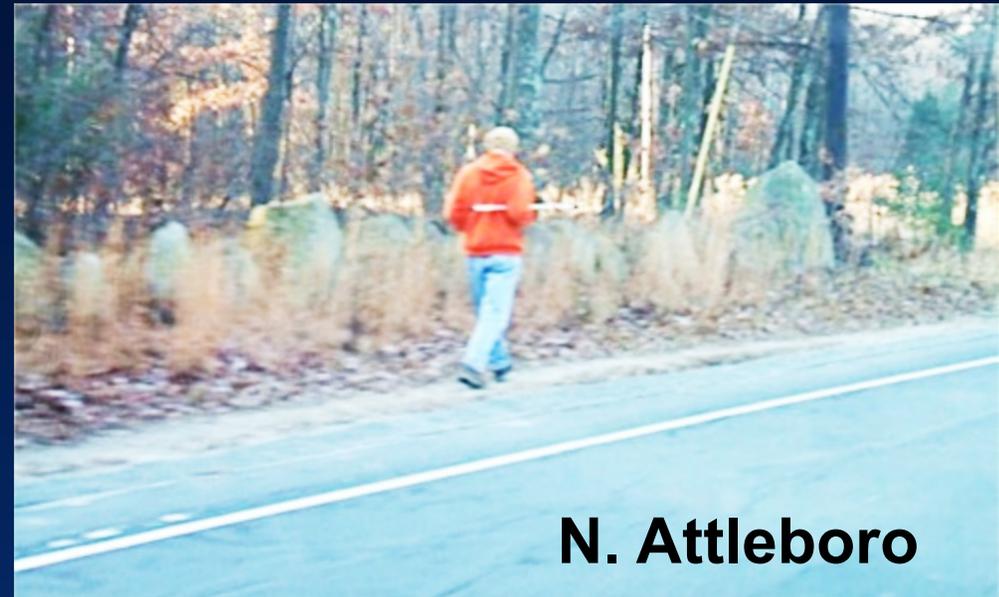
Westford



N. Adams



Bedford



N. Attleboro

But how far back?

Preferred sidewalk setback:



**Even a bike lane
adds buffer**

1.0 Fenton minimum

4. Safety & access.

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



Median islands



Roundabouts



Curb extensions

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

www.markfenton.com

Lane re-alignments

- 5 or 4 lanes reduced to 3, “road diets.”

- Reduces collisions & severity.
- Improves performance for pedestrians, bikes.



Urbana, IL; before & after.

Four Elements of Healthy Community Design:



Mix of destinations



Ped, bike, & transit network



Safety & access



Site design

www.activelivingresearch.org

www.markfenton.com

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

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



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

***www.ceosforcities.org/work/walkingthewalk
www.walkscore.com**

www.markfenton.com

On Common Ground Nat'l Assoc. of Realtors pub.; Summer 2010, 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

Dec. 2012, Nov 2013

EPA United States Environmental Protection Agency

December 2012
www.epa.gov/smartgrowth



SMART GROWTH AND ECONOMIC SUCCESS:
BENEFITS FOR REAL ESTATE DEVELOPERS, INVESTORS,
BUSINESSES, AND LOCAL GOVERNMENTS

Office of Sustainable Communities
Smart Growth Program

EPA United States Environmental Protection Agency

November 2013
www.epa.gov/smartgrowth



SMART GROWTH AND ECONOMIC SUCCESS:
THE BUSINESS CASE

Office of Sustainable Communities
Smart Growth Program

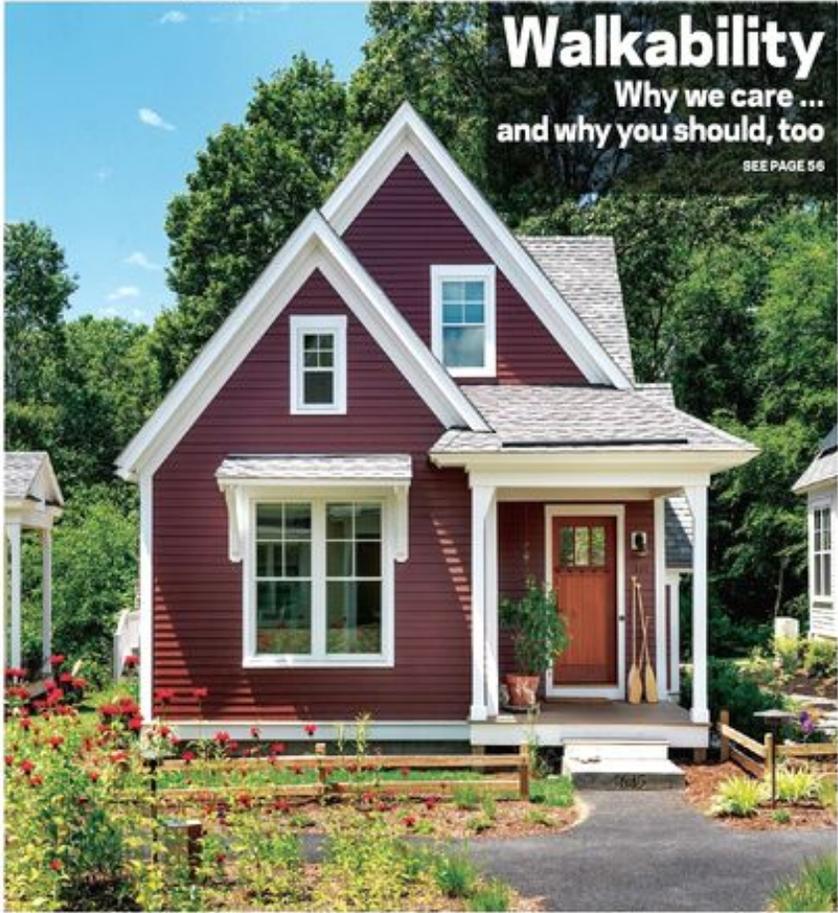
SMART BUILDING STARTS HERE

THE MAGAZINE
OF THE NATIONAL ASSOCIATION
OF HOME BUILDERS

Builder

Walkability
Why we care ...
and why you should, too

SEE PAGE 56



MARCH 2014 WWW.BUILDERONLINE.COM

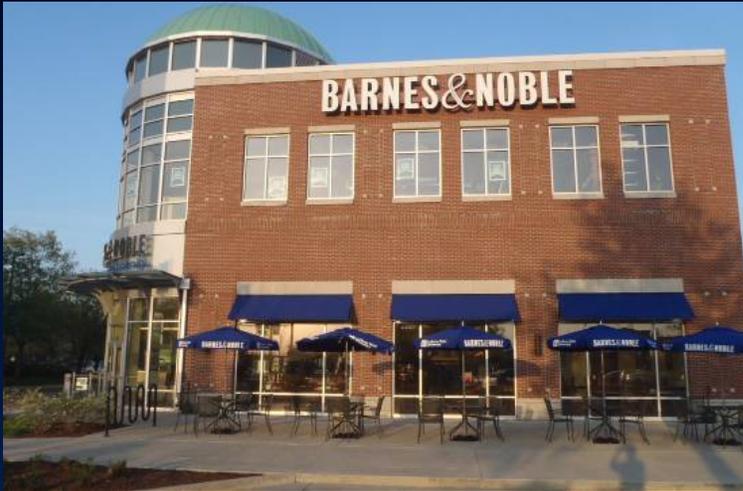
Walkability. Why we care & why you should too!

Builder Magazine,
Mar. 2014

- Consumer desire
- Flexibility in design
- Lower development costs . . .

What's happening?

- Malls & box stores have a very finite lifespan . . .



Winter Park FL

- Employers seek livable communities where employee health, retention, & satisfaction are high!

Healthy Design = Triple Bottom Line . . .



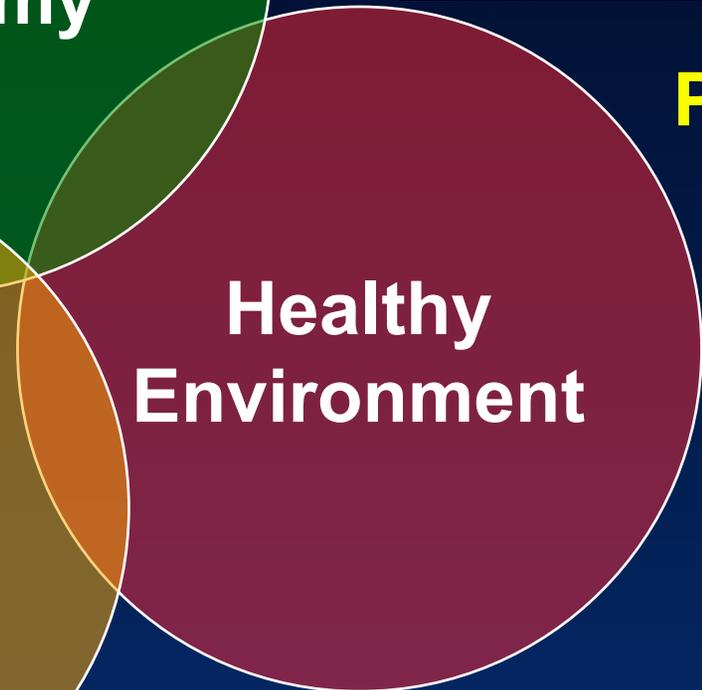
Prosperity



Planet



People



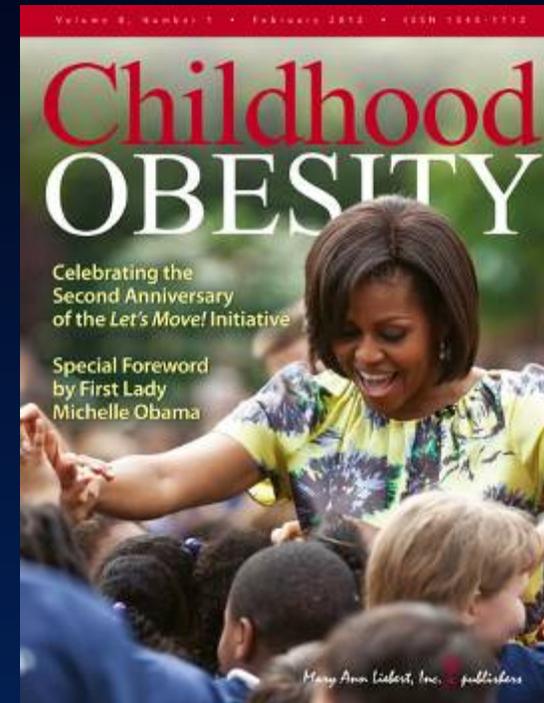
So how to get there?



Utilize five national movements changing the “health” landscape.

(Fenton, Community Design & Policies for Free Range Children, *Childhood Obesity* 8(1), Feb 2012)

1. Healthy planning & zoning.
2. Complete Streets.
3. Transportation trail networks.
4. Transit- & bicycle-friendly policies.
5. Comprehensive Safe Routes to School.



1st: 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

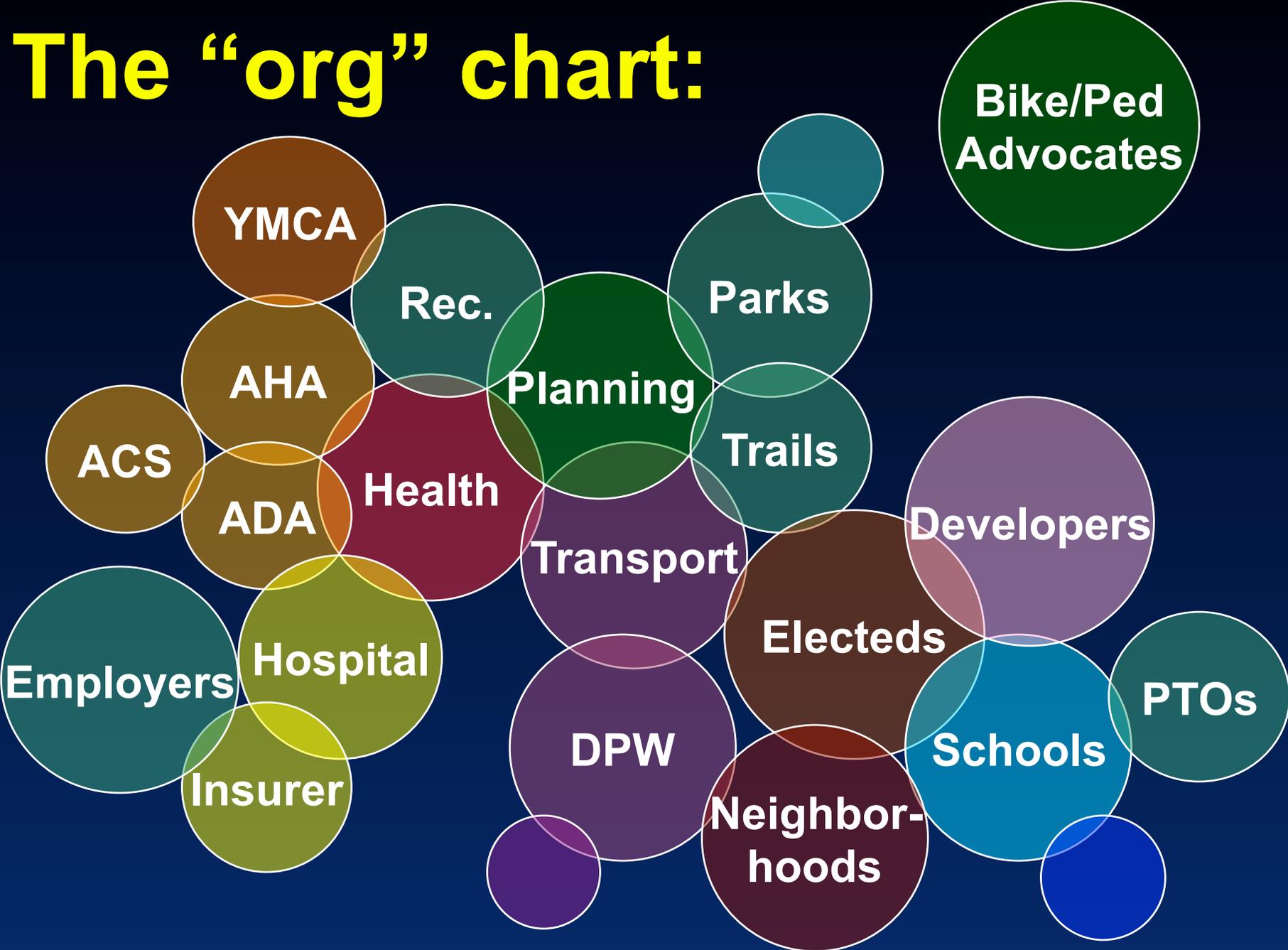


Policy information:

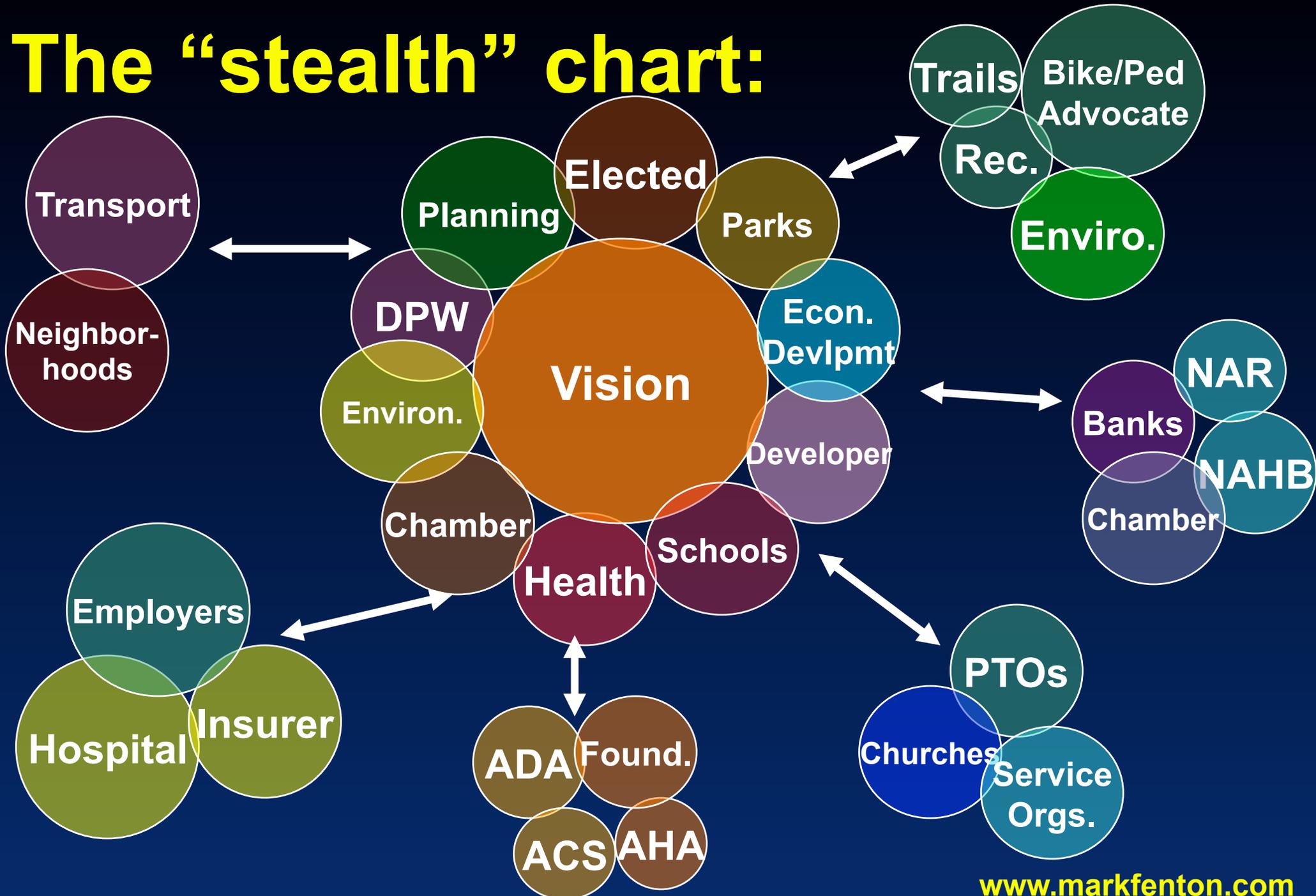
www.lgc.org

www.vtppi.org

The “org” chart:



The "stealth" chart:



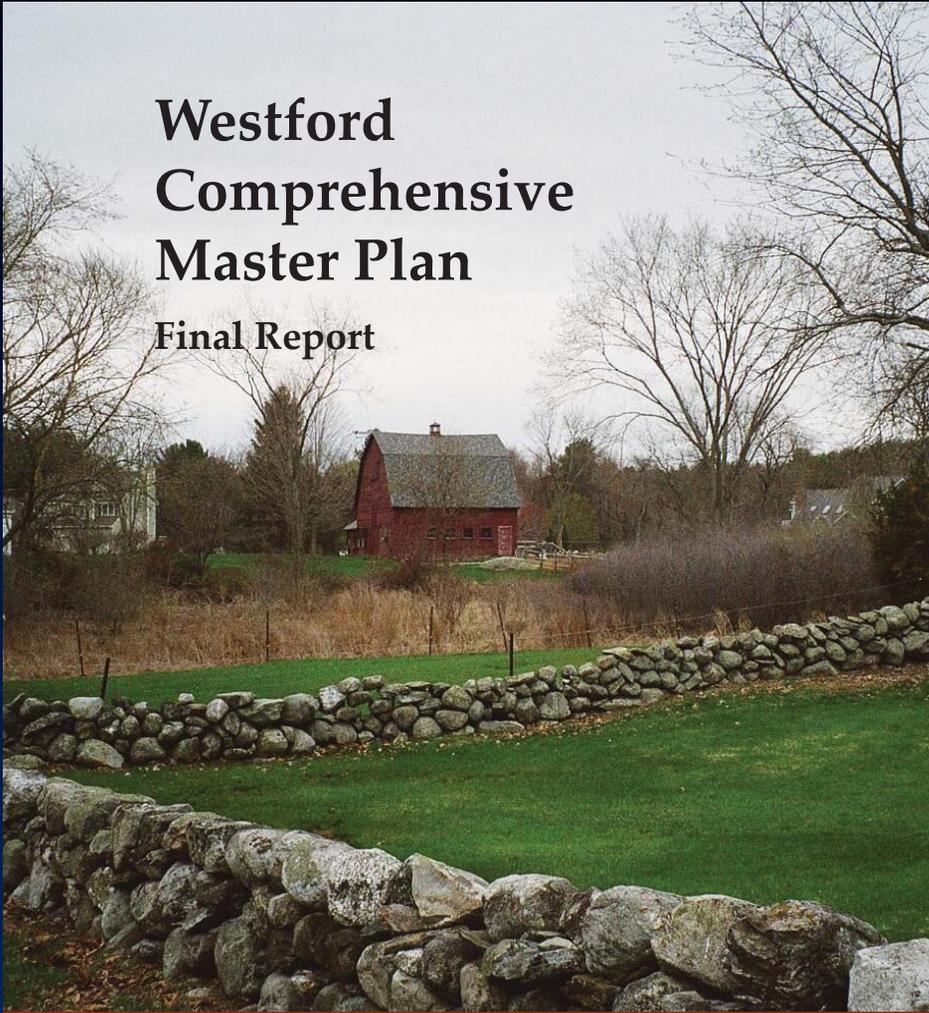
To be on the stealth leadership team people must:

- Fully embrace **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.



1. Comprehensive Plan . . .

Westford
Comprehensive
Master Plan
Final Report



- Identifies the triple bottom line in your visioning work.
- Specifically mentions desire for a more walkable, bike-friendly community.

Westford Planning Board
Westford Comprehensive Master Plan Committee
April 2009



Westford's vision

- Works to protect public health, safety, & welfare of all residents.
- Respects, promotes class & cultural diversity.
- Promotes . . . appreciation of governance.
- Supports local economy & businesses.
- Values its exceptional public schools.
- Appreciates its natural resources & open space.
- Celebrates & preserves its heritage.

Key principles . . .

- Focus development near village centers . . .
- Multi-story buildings at sidewalk; reduce/share parking; grid streets.

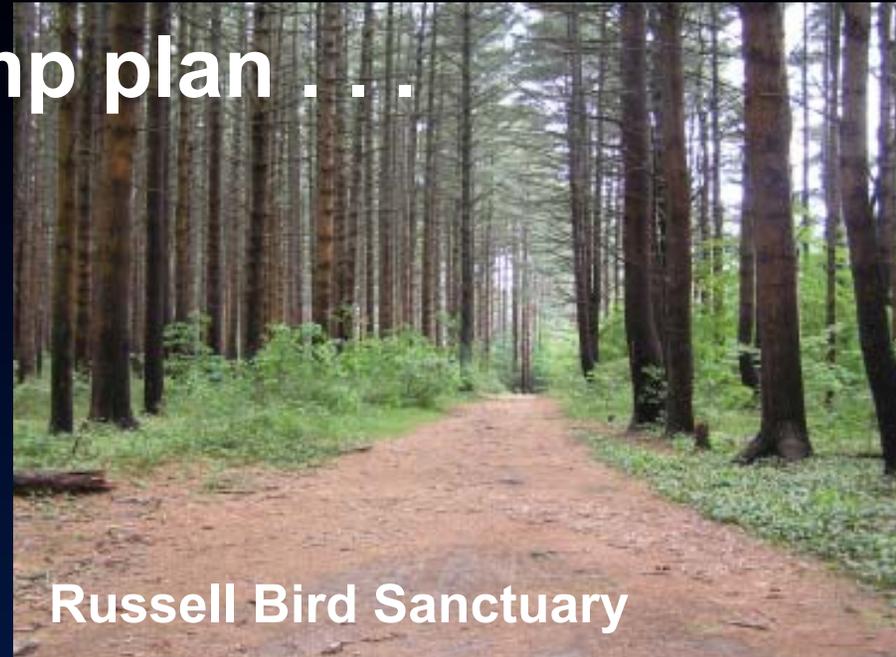




Wolcott VT
April, 2015 >
July, 2015 v



These are photos in your comp plan . . .



Russell Bird Sanctuary





Not these!





Reading, MA

www.markfenton.com

Residential

- More compact, walkable layouts.
- Conserve open space.
- Sidewalks both sides, trail links required.

More like these?



Less of this?

Step 1: Require **multi-modal transportation** analysis (not just *traffic*) for all development.



MMTA vs TIA mitigation:

- Sidewalk, trail link, benches.
- Bike lane, sharrows, parking.
- Bus pull-out, transit shelter.

*** Require health dept. sign-off on subdivisions?**

S.122: An act promoting the planning and development of sustainable communities.

SENATE DOCKET, NO. 317 FILED ON: 1/14/2015

SENATE No. 122

By Mr. Wolf, a petition (accompanied by bill, Senate, No. 122) of Daniel A. Wolf, Stephen Kulik, Chris Walsh, Louis L. Kafka and other members of the General Court for legislation to promote the planning and development of sustainable communities. Community Development and Small Businesses.

The Commonwealth of Massachusetts

In the One Hundred and Eighty-Ninth General Court
(2015-2016)

An Act promoting the planning and development of sustainable communities.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

WHEREAS, Article 89 of the Amendments to the Massachusetts Constitution, which was ratified by the voters in 1966, empowers municipalities to “exercise any power or function which the general court has power to confer upon it, which is not inconsistent with the constitution or laws enacted by the general court”;

Local empowerment:

- Subdivision guidelines.
- Inclusionary zoning.
- Form based codes.
- Purchase/transfer of development rights.
- Impact fees.
- Eliminating ANR.
- Master plans w/ legal standing.

2. Build Complete Streets into ordinance:

- All pedestrians, cyclists, transit riders, & drivers, of all ages & abilities considered in every road project (new, repair, maintenance).
- Only limited, specific exceptions.



**E.g. calm traffic:
roundabouts,
mini-circles;
often to replace
4-way stop.**



Longmont, CO



W. Seattle



Madison, WI

Target phases of CS implementation:

- i. **Step 1:** Pass a policy resolution or executive order (*whereas . . . be it resolved . . .*)
- ii. Execute some **demonstration projects**.
- iii. Adopt detailed roadway design standards or *guidelines*.
- iv. Include CS principles in absolutely every project (including routine paving, painting, & maintenance work, etc.).



E.g. curb extensions



Billings



NY



St. Louis

3. Develop trails for transportation, not just recreation . . .

- **Connect** to the transport network (sidewalks, bike lanes, transit stops).
- Focus on **destinations** (schools, shopping, parks, senior housing)
- Be ready for **NIMBY, BANANA & CAVE.**



Robinson school,
Principal LaCoste



- **Step 1:** Inventory goat trails (where people already walk/bike).
- **Improve,** formalize links.



To Westford Academy



Blanchard MS



Norman E.
Day School

Connecting subdivisions?

Buckingham



Hitching Post



Beaver Brook



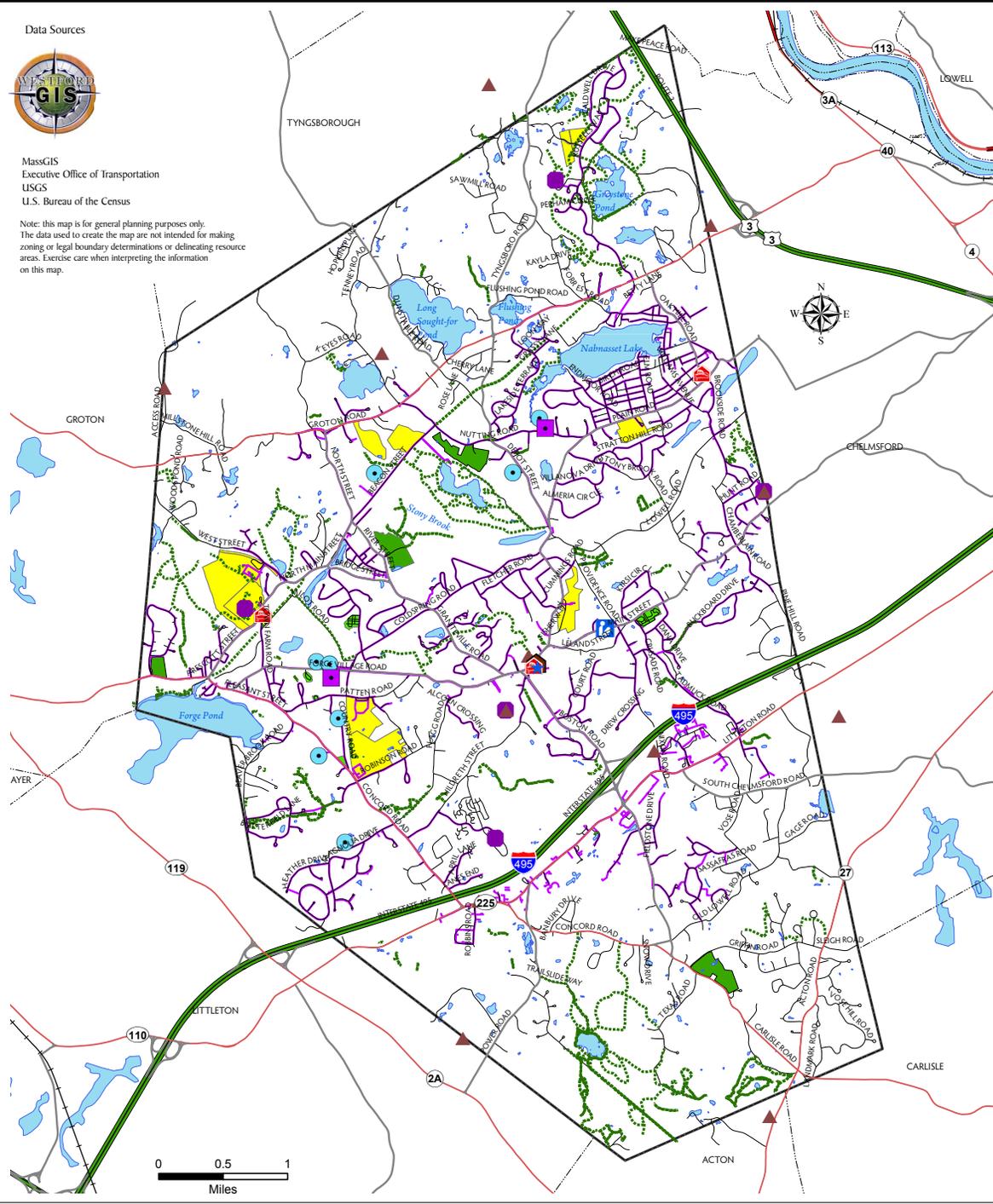
Possible link from subdivisions to Robinson School

Data Sources



MassGIS
Executive Office of Transportation
USGS
U.S. Bureau of the Census

Note: this map is for general planning purposes only.
The data used to create the map are not intended for making
zoning or legal boundary determinations or delineating resource
areas. Exercise care when interpreting the information
on this map.



Trails can become a significant piece of the active transportation network in Westford.

LEGEND

- Open Water
- Railroad Tracks
- ROADWAYS**
- Limited Access Highway
- Multi-lane Hwy, not limited access
- Other Numbered Highway
- Major Road, Collector
- Local Roads
- Trails
- Cell Towers
- WATER DEPARTMENT**
- Pumping Station
- Tank
- Treatment Plant
- Water Mains
- PUBLIC FACILITIES**
- Public Schools
- Recreation Areas
- Cemeteries
- Police Station
- J. V. Fletcher Library
- Fire Stations
- Westford Town Hall

4. Make it bike-friendly.

- Bike rack design contest; school to fabricate racks, businesses to adopt.
- Bike corral at events.
- Community or work place bike sharing programs.v



Salem, Spins



No. Adams, MA

bikeleague.org

www.markfenton.com

4a. Create a bicycle-friendly community.

- Maps, way-finding signs.
- Bike lanes & sharrows on wide streets.
- Education, skills. >



Blue
Island, IL.
babc.us

4a. Improve access to transit .

- Park & ride?
- Community shuttle, circulator?
- Eventually multi-use trail access?

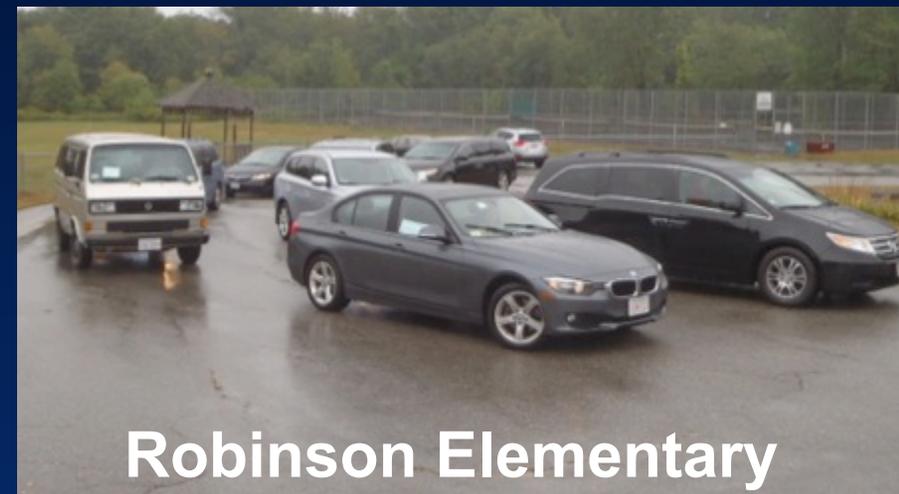


5. Safe Routes to School – only if Admin. is fully invested!

- **Evaluate** where kids come from, by what travel mode.
- Community workshops . . .
- **Engineer** improved routes.
- **Educate & encourage** safe behavior (drivers & kids).
- **Enforce** proper speeds, procedures for all.

www.saferoutesinfo.org

www.commute.com/schools



Robinson Elementary

E.g. Systematic approach.

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

www.saferoutesinfo.com



***Step 1:** Show-of-hands surveys in all schools.

www.markfenton.com



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

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



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