Building momentum: Championing active and healthy built environments to create healthy communities

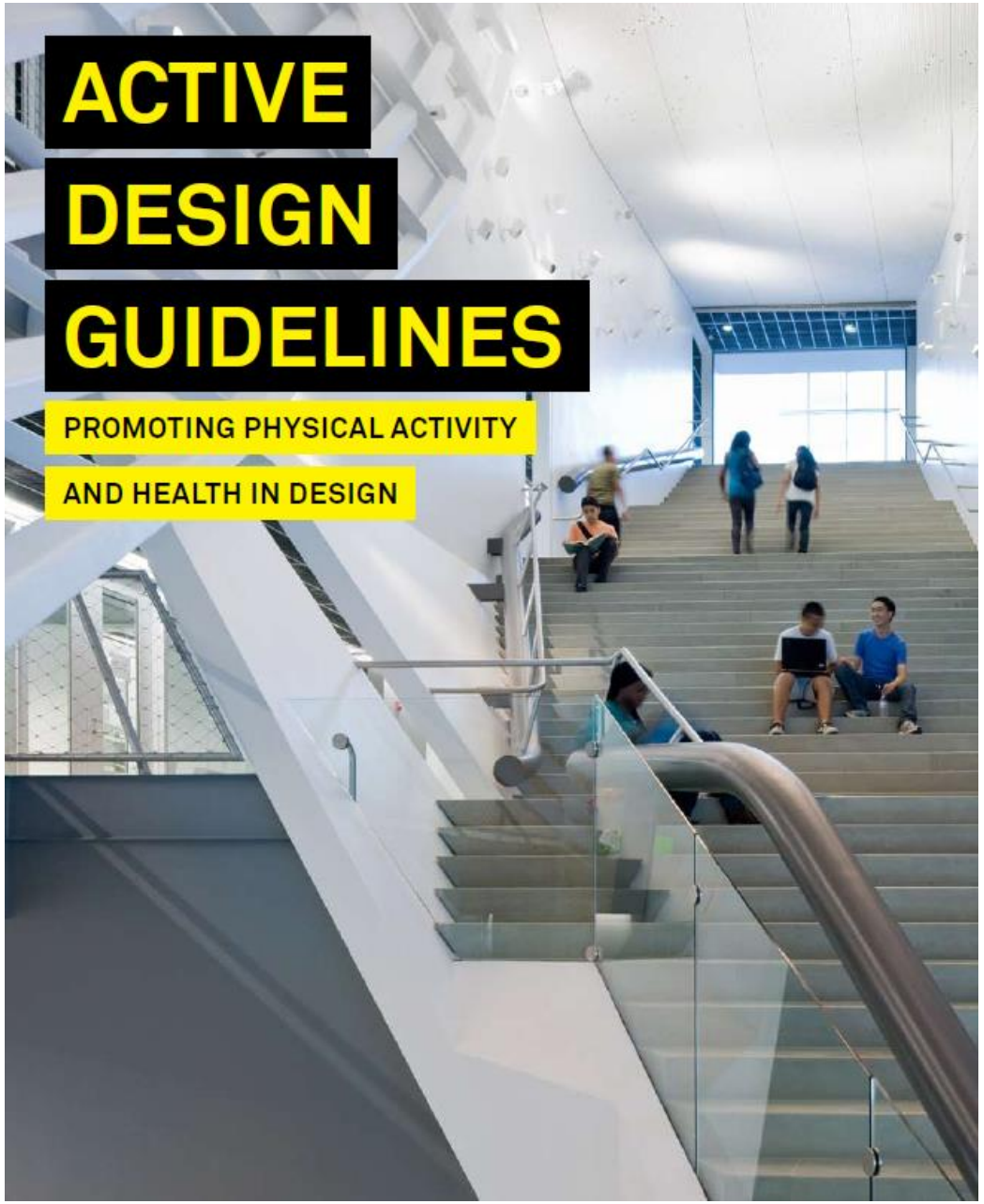
Karen K. Lee, MD, MHSc

HEALTHY CANADA by design

CLASP
COALITIONS LINKING ACTION & SCIENCE FOR PREVENTION

An initiative of:

CANADIAN PARTNERSHIP AGAINST CANCER
PARTENARIAT CANADIEN CONTRE LE CANCER



THE 19th CENTURY:

Infectious Diseases

19th Century codes, planning and infrastructure as weapons in the battle against contagious disease

These strategies were built into the city fabric, and they were effective

THE 21st CENTURY:

Chronic Diseases,
many of which are
"Diseases of Energy"

The emerging design solutions for health parallel sustainable design solutions

Effective designs will have to be an invisible, pervasive, and inevitable part of life

The epidemics of today are:

CHRONIC DISEASES

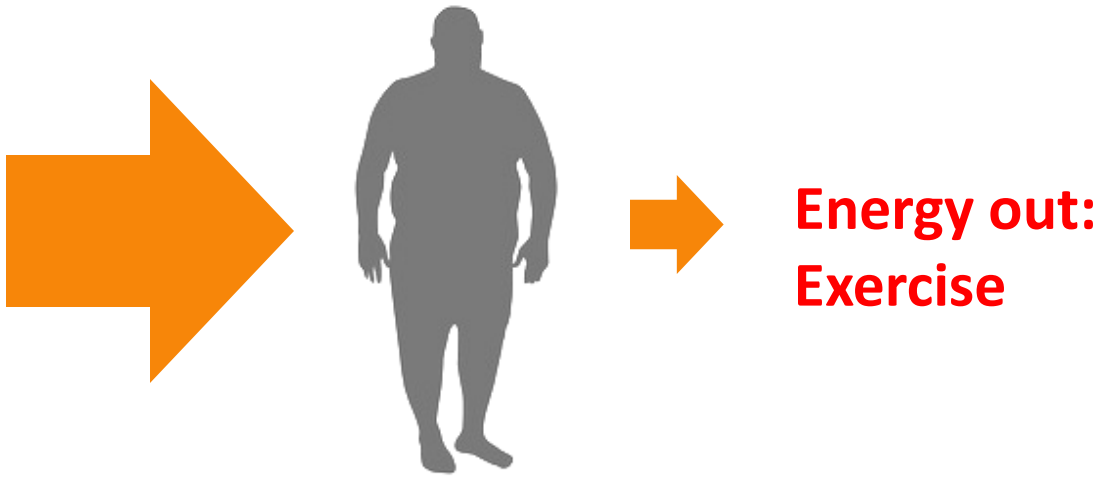
(obesity, diabetes, heart disease & strokes, cancers)

Chronic Diseases - #1 cause of death globally (36 million deaths/y).

Leading Risk Factors accounting for 80% of deaths_ (WHO 2011):

- Tobacco
- **Physical Inactivity**
- **Unhealthy Diets**
- Harmful Use of Alcohol

Energy in: Food



Energy out: Exercise

Evidence Base for Improving Health through Building, Street and Neighborhood Design

www.thecommunityguide.org/pa

Designing to increase active transportation

Walking, Bicycling and Transit-oriented development

Designs to improve street safety and aesthetics (less crime and traffic / more greening), having sidewalks and bike paths connected to destinations, mixed land use, high population density

Median increase in physical activity 35% to 161%

Designing to increase active recreation

Enhancing access to places for physical activity, such as creating walking trails or having onsite or nearby parks, playgrounds and exercise facilities (homes & worksites)

increases leisure-time activity and weight loss

Designing to increase stair use

Point-of-Decision stair prompts

Signs placed at elevators & escalators encouraging stair use, w/ info on benefits of stair use

Median 50% increase in stair use

Design and aesthetic interventions

Music & art in stairwells

Design stairs to be more convenient and visible

Skip-stop elevators

3300% increase in stair use

Translating Health Evidence into Non-Health Policies Affecting Health

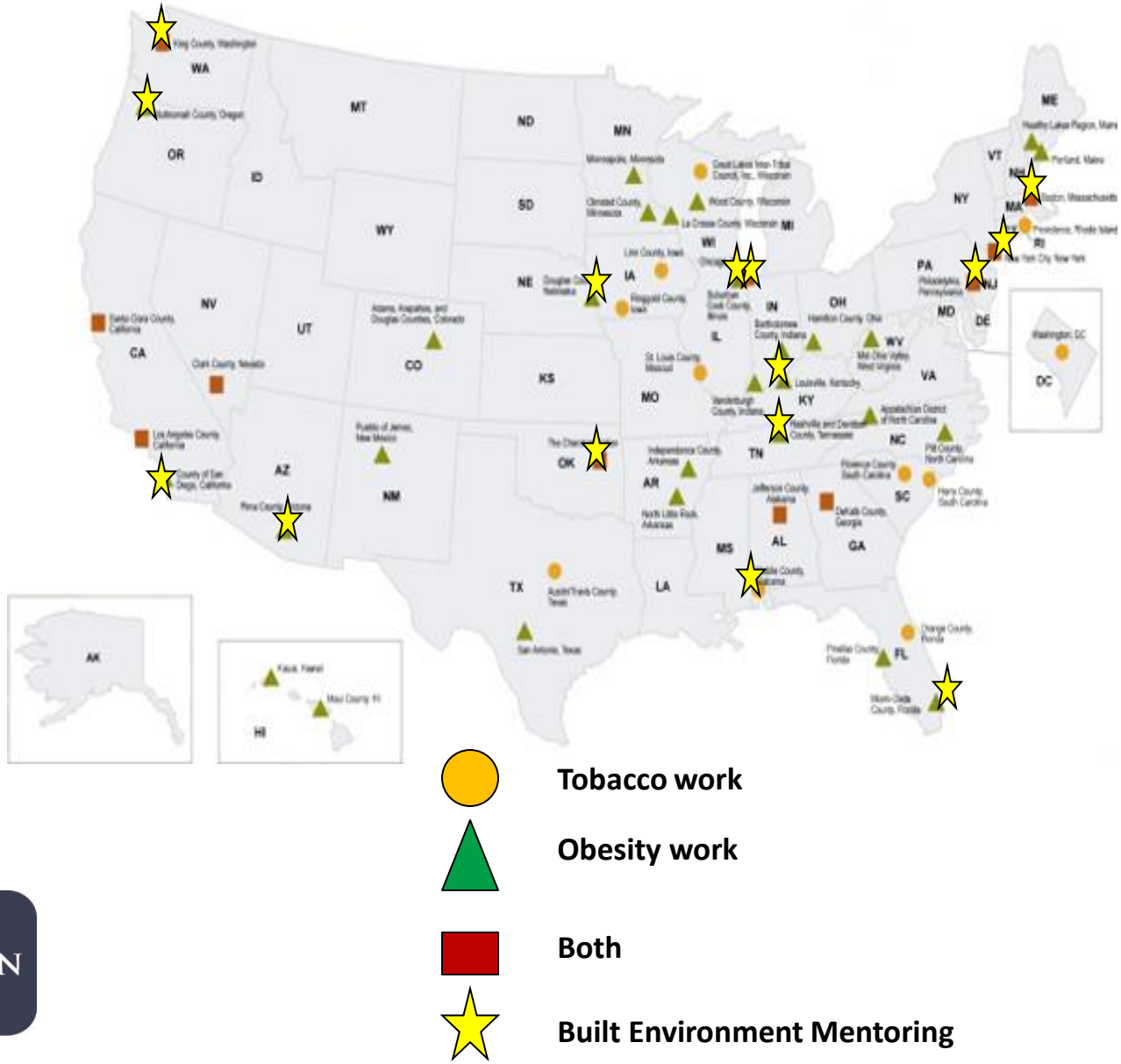
KEY LESSONS LEARNED:

- The Need for **Partnerships – Core and Extensive**
- **Finding Synergies and Co-Benefits**
- **Complementary Roles** of Core Partners
  - **Health: Presenting the available research-based evidence** and the epidemiology of disease; **organized early meetings/conferences** to do so
  - **11 non-health departments**: Ideas of what's feasible in the current local context; identifying **opportunities and mechanisms**, including and especially synergistic efforts
  - **Health: Playing a supporting role for implementing ideas** – presenting the health evidence; assisting with **strategy and planning**, undertaking **studies to inform implementation planning and evaluation**; providing **resources for coordination of intersectoral meetings, initiatives** and follow-up
  - **Non-health departments**: **Co-leadership** and participation in the efforts
  - **Researchers**: evidence reviews and synthesis, evaluation research
- **Garnering Review, Feedback and Inputs** from an Extensive Group of Partners
- Using **Evidence-Based and Best-Practice Strategies**
- Using **Annual Conferences as Strategic Milestones** to Highlight Successes and Craft Strategic Next Steps with Extensive Group of Partners

Cross-Sector Engagement

Nationally in the U.S.: CDC's Investments in Creating Healthier Environments to Address Obesity and Tobacco

- Communities Putting Prevention to Work Funding (2010-March 2012)
- Communities Putting Prevention to Work Built Environment Mentoring Program (2011-June 2012)



COMMUNITIES PUTTING PREVENTION TO WORK

Cross-Sector Partnerships

Key Intergovernmental Partnerships (n=15 communities, incl. NYC):

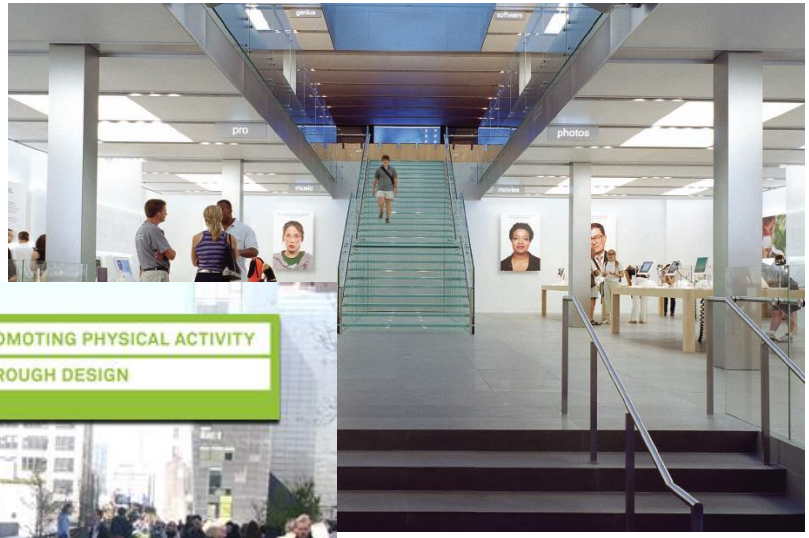
- Planning – 15
- Transportation – 14
- Education/School Construction – 12
- Parks and Recreation – 12
- Public Works – 8
- Housing Development or Management – 6
- Buildings – 3

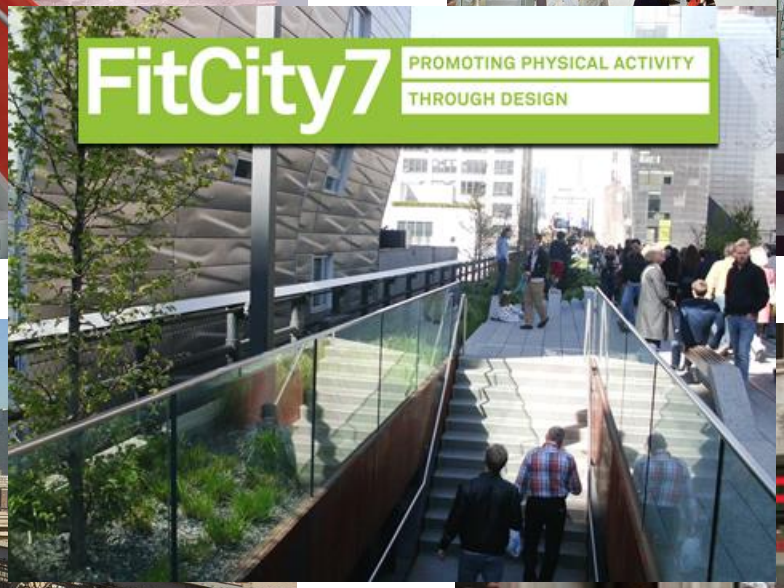
Cross-Sector Partnerships

Non-Governmental Partnerships (n=15 communities, incl. NYC):

- Community-Based/Non-Profit Groups – 13
- Environmental Organizations – 9
- American Planning Association local chapter – 7
- American Institute of Architects local chapter – 5
- American Society of Landscape Architects local chapter – 3
- Local Architecture, Planning and Design Institutions – 3
- Building Owners and Managers Association – 1

Fit City Conferences: Creating Forums for Dialogue





Identifying and Highlighting Synergies and Co-Benefits

Synergies:

- Health
- Safety
- Environmental Sustainability
- Universal Accessibility
- Economic Benefits

Co-benefits: Improve the Environment

	Fuel / Electricity Use	Air Quality	Obesity/Diabetes/ Heart Disease
Biking or walking rather than automotive transport	√	√	√
Stairs rather than elevators and escalators	√	√	√
Active recreation rather than television	√	√	√
Safe tap water rather than bottled and canned beverages	√	√	√
Fresh produce rather than unhealthy processed foods	√	√	√

Co-benefits: Create more accessible places

- Creating safer places to walk, bicycle, take transit, & for wheelchair travel

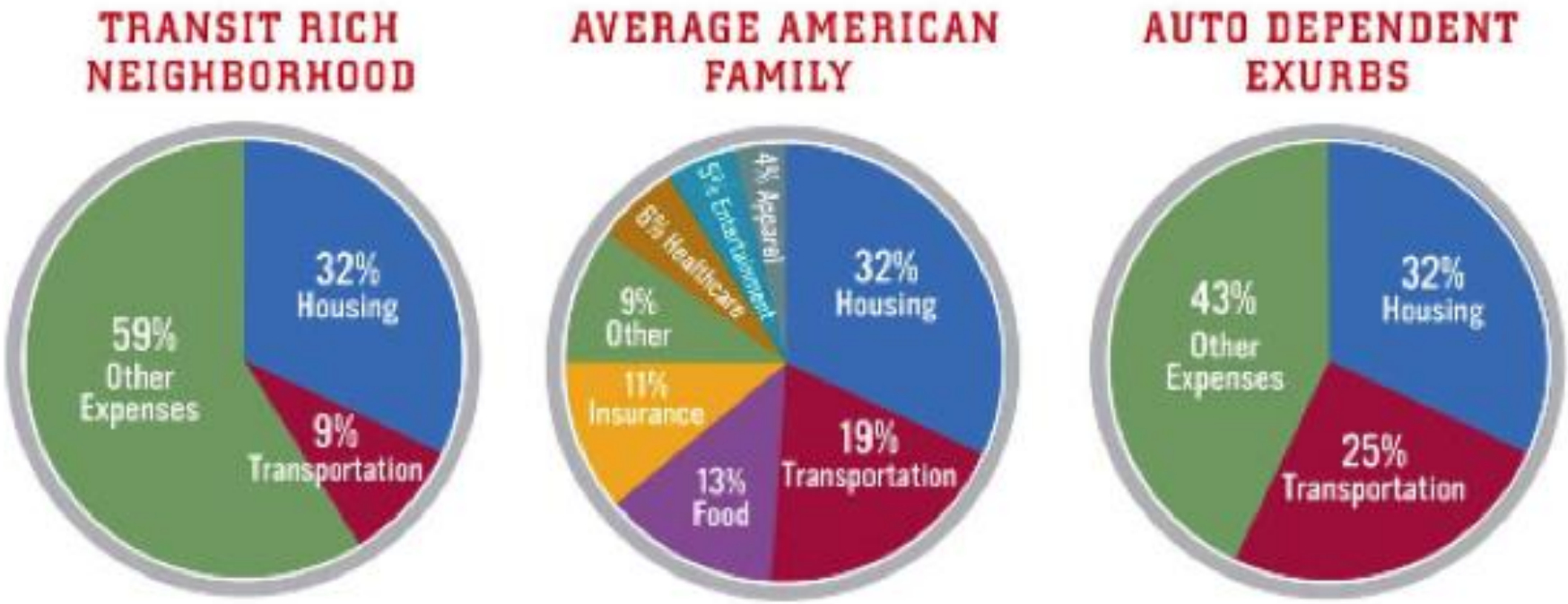
Co-benefits: Strengthen our economy

More compact development patterns save money on avoided infrastructure costs

	Water & Sewer Laterals Required	Water & Sewer Costs (billions)	Road Lane Miles Required	Road Land Miles Costs (billions)
Sprawl Growth Scenario	45,866,594	$189.8	2,044,179	$927.0
Compact Growth Scenario	41,245,294	$177.2	1,855,874	$817.3
Savings	**4,621,303**	**$12.6 (10.1%)**	**188,305**	**$109.7 (6.6%)**

Sprawl Costs: Economic Impacts of Unchecked Development, Robert W. Burchell, Anthony Downs, Barbara McCann and Sahan Mukherji, Island Press, 2005

Co-benefits: Save people money



People in walkable, transit-rich neighborhoods spend only 9 percent of their monthly income on transportation costs; those in auto-dependent neighborhoods spend 25 percent.

Source: Center for Transit-Oriented Development

Co-benefits: Create jobs

Project type	Road	Bicycle	Pedestrian	Off-street trail	Number of projects	Direct jobs per $1 million	Indirect jobs per $1 million	Induced jobs per $1 million	Total jobs per $1 million
Total, all projects					58	4.69	2.12	2.15	8.96
Bicycle infrastructure only		•			4	6.00	2.40	3.01	11.41
Off-street multi-use trails				•	9	5.09	2.21	2.27	9.57
On-street bicycle and pedestrian facilities (without road construction)		•	•		2	4.20	2.20	2.02	8.42
Pedestrian infrastructure only			•		10	5.18	2.33	2.40	9.91
Road infrastructure with bicycle and pedestrian facilities	•	•	•		13	4.32	2.21	2.00	8.53
Road infrastructure with pedestrian facilities	•		•		9	4.58	1.82	2.01	8.42
Road infrastructure only (no bike or pedestrian components)	•				11	4.06	1.86	1.83	7.75

Building bicycle and pedestrian infrastructure creates more jobs per dollar invested, compared to road infrastructure only

Source: Political Economy Research Institute: June 2011

Co-benefits: Create desirable places to live, work & play

Sprawl Community :

Preferred by 43%

There are **only single-family houses** on large lots

There are **no sidewalks**

Places such as shopping, restaurants, a library, and a school are within **a few miles** of your home and **you have to drive** most places

There is enough parking when you drive to local stores, restaurants, and other places

Public transportation, such as bus, subway, light rail, or commuter rail, is **distant or unavailable**

Smart Growth Community : Preferred by 56%

There is a **mix** of single-family detached houses, townhouses, apartments, and condominiums on various sized lots

Almost all of the streets have **sidewalks**

Places such as shopping, restaurants, a library, and a school are within **a few blocks** of your home and **you can either walk or drive**

Parking is limited when you decide to drive to local stores, restaurants, and other places

Public transportation, such as bus, subway, light rail, or commuter rail, **is nearby**

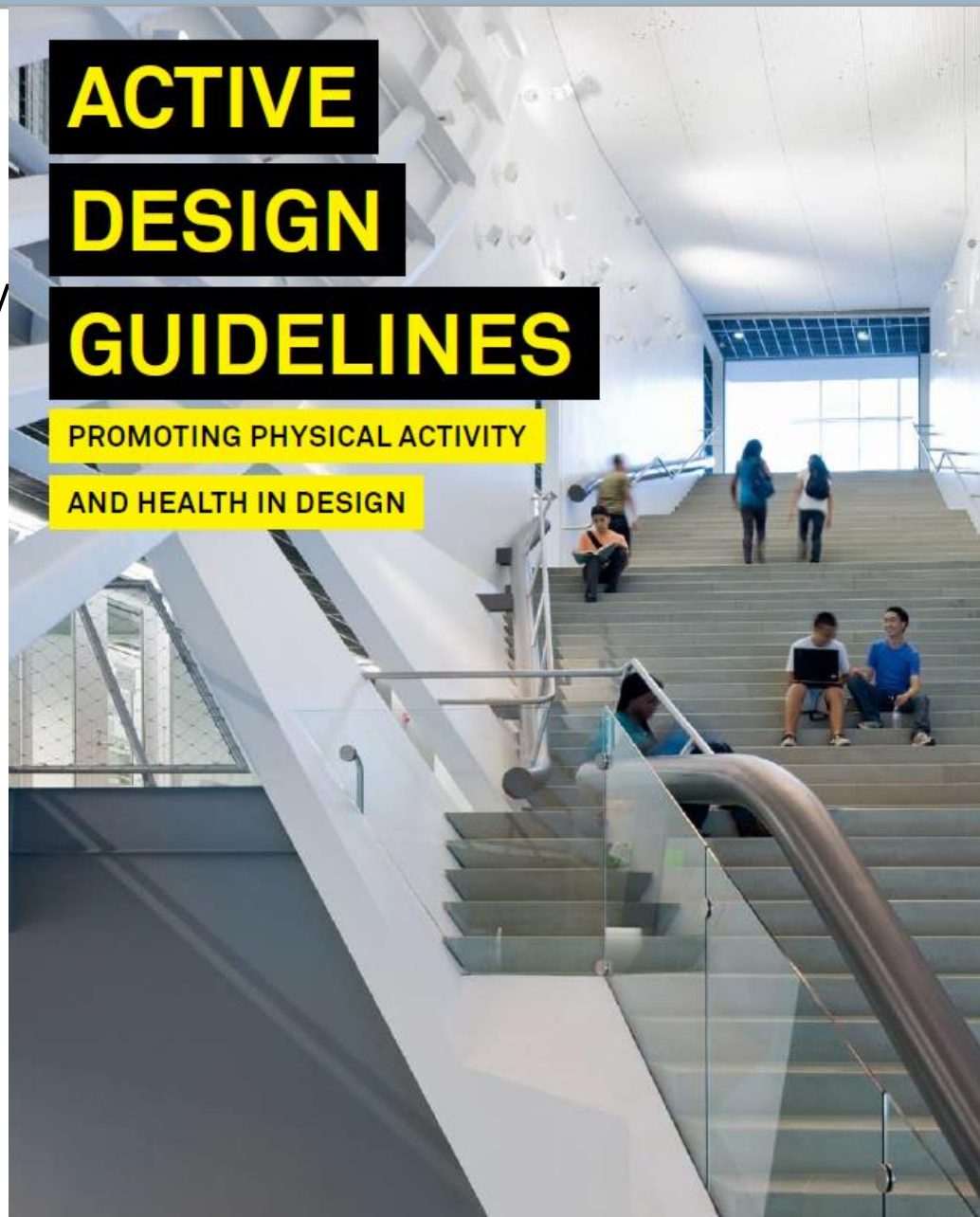
Source: NAR National Poll, 2011 Q: In which community would you rather live?

Creating Initiatives with Cross-Sector Leadership

Chapters

1) Environmental Design and Health: Past and Present
2) Urban Design: Creating an Active City
3) Building Design: Creating Opportunities for Daily Physical Activity
4) Synergies with Sustainable and Universal Design

Co-led by 4 city departments,
And with involvement of
12 departments.



Creation of the Guidelines

Consultation with Design and Built Envir Practitioners

The guidelines were tested through an interdisciplinary **ADG Design Charrette in January 2009**

Participants:
NY City Agencies/ Guideline Developers/ AIA/ APA/ ASLA/Engineers

Implementation of Policies and Practices

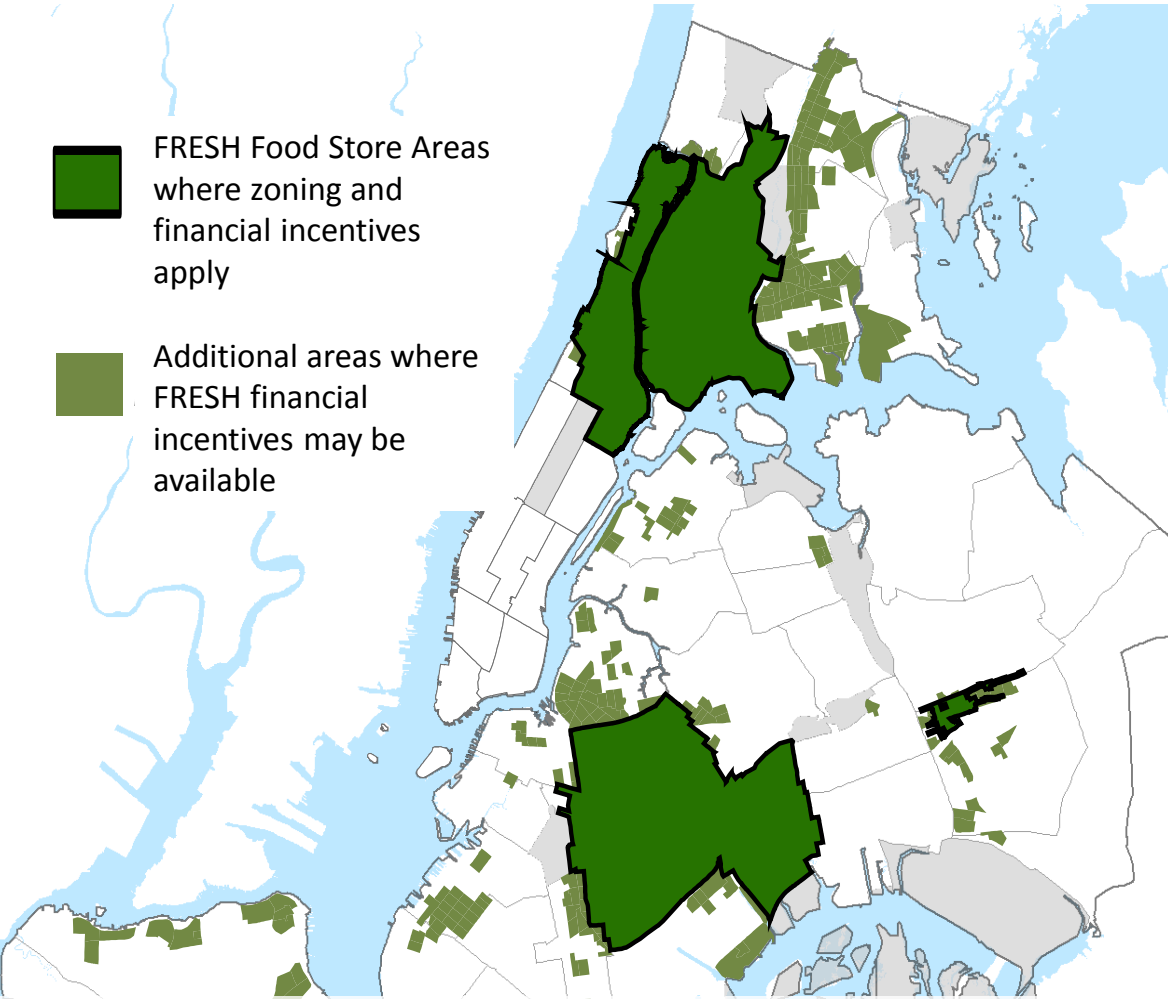
Use Available Processes Known to BE Stakeholders: Eg. LEED Green Building Ratings Systems

Development **density** and community **connectivity**

Public transportation access

Bicycle storage and changing rooms

Creating Incentives: NYC FRESH Program



Zoning and tax incentives for providing **fresh food** options in the city's underserved areas with high health needs

Integrating Health Items into City Administrative Processes Across Sectors

- Public Sector RFPs and Contracts

- Guidelines and Standards for Design and Construction in Different Agencies – Public Buildings, Streets, Parks, Schools, Housing

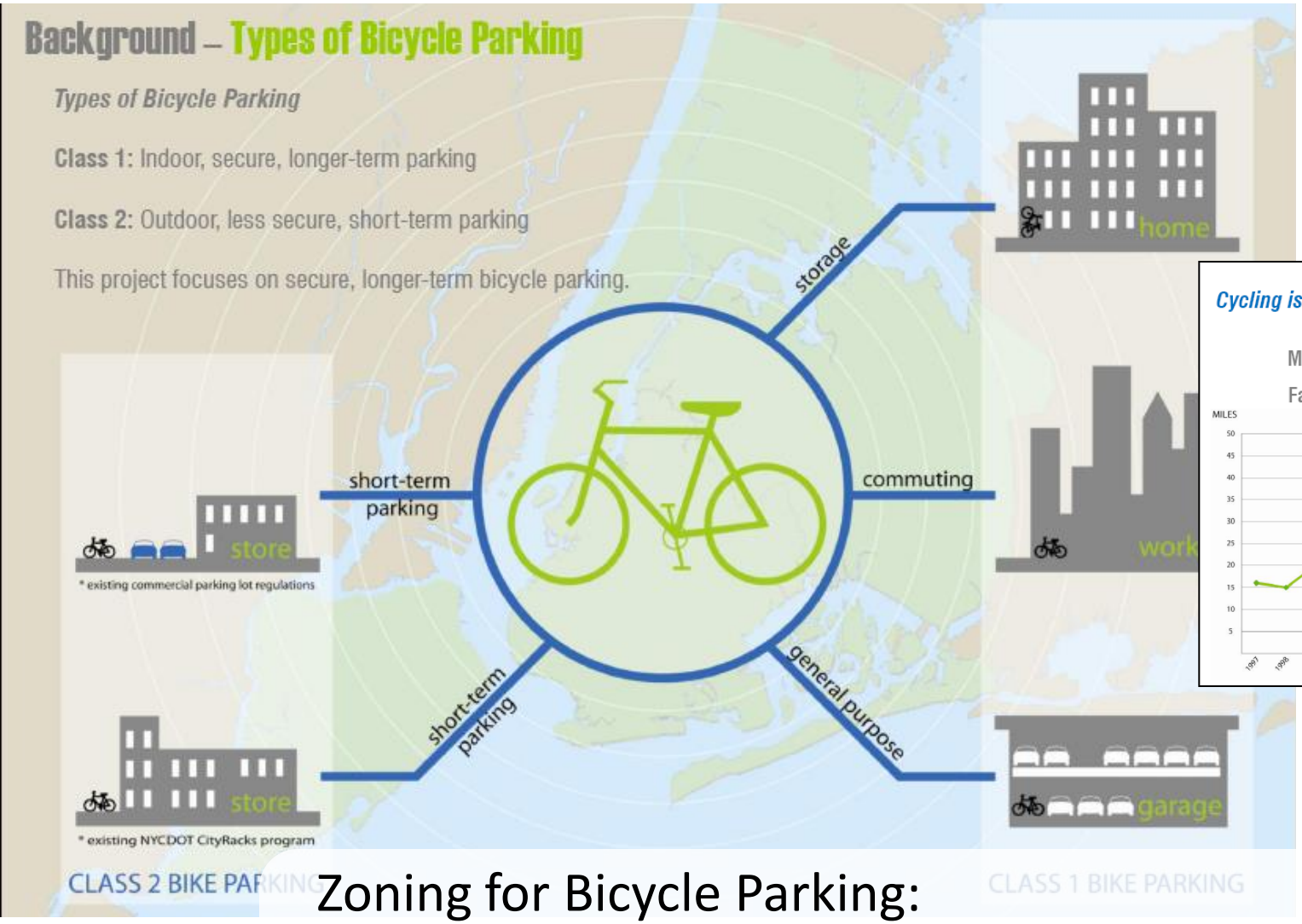
- Health issues and checklists included in development review processes and approvals

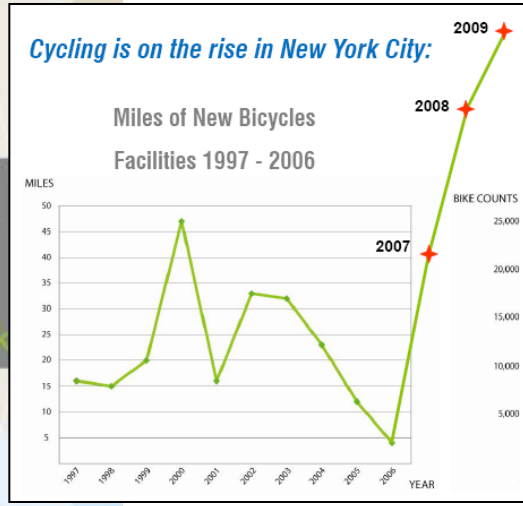
- Training of City staff in all relevant agencies

Integrating Health into Non-Health Legislative Processes: NYC Green Codes

Increasing drinking water access through better tap water facilities – passed in Plumbing Code

Mandating + Relieving Burdens: Zoning for Bicycle Parking





Zoning for Bicycle Parking:

Increasing active transport by providing safe and secure parking for bike commuters

Pilots with Evaluation for Multiple Outcomes

Pedestrian volumes up:

- 6% in Herald Square
- 11% in Times Square

Retail up:

- in Times Square
- 49% drop in vacant storefronts in Union Square

Impacts in NYC

- Increased:
  - Commuter cycling – up 289%
  - Pedestrian volumes through pedestrian plazas
  - Bus and subway ridership – up 10%
  - Places for children's play - >60 new Play Streets permitted; >180 schoolyards to playgrounds opened

- Decreased:
  - Traffic fatalities 37%
  - Traffic volumes 1.5%
  - Car registrations 5%

- Started Reversing Childhood Obesity (also in Philadelphia & San Diego!)

- Positive Environmental and Economic Impacts