Creating Healthy Communities Through Design

Rail~volution | October 18, 2011
Outline

• Health case for creating active communities
• Active Design work in NYC
• Active Design program highlights: PlayStreets & FRESH

Dr. Karen Lee, MD, MHSc, FRCPC
Director, Built Environment Program
NYC Department of Health & Mental Hygiene
100+ years ago, urban conditions in U.S. cities were a breeding ground for disease epidemics.

**Over-crowding:**
By 1910, the average density in lower Manhattan was 114,000 people/sq. mi; two wards reached densities > 400,000. (Today’s density: 67,000/sq. mi.)

**Inadequate systems** for garbage, water, and sewer, leading to pervasive filth and polluted water supplies.

**Major epidemics:**
- Air/droplet-borne diseases: TB
- Water-borne diseases: Cholera
- Vector-borne diseases: Yellow-fever
New York’s water system established – an aqueduct brings fresh water from Westchester.

NYC creates Central Park, hailed as “ventilation for the working man’s lungs”, continuing construction through the height of the Civil War.

Dept. of Street-sweeping created, which eventually becomes the Department of Sanitation.

New York State Tenement House Act banned the construction of dark, airless tenement buildings.

First section of Subway opens, allowing population to expand into Northern Manhattan and the Bronx.

Zoning Ordinance requires stepped building setbacks to allow light and air into the streets.
## The results

<table>
<thead>
<tr>
<th>Deaths</th>
<th>1880</th>
<th>1940</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infectious Diseases</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Contagion</td>
<td>12.5%</td>
<td>0.2%</td>
</tr>
<tr>
<td>- Diarrhea</td>
<td>9.6%</td>
<td>0.5%</td>
</tr>
<tr>
<td>- Tuberculosis (TB)</td>
<td>20.8%</td>
<td>5.0%</td>
</tr>
<tr>
<td>- Pneumonia</td>
<td>13.2%</td>
<td>5.6%</td>
</tr>
<tr>
<td>- Typhoid</td>
<td>1.0%</td>
<td>0.003%</td>
</tr>
</tbody>
</table>

**Today:** 70% of deaths in U.S. each year are from chronic diseases.

In 2005, **133 million Americans** – almost 1 out of every 2 adults – had at least one chronic illness.

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults
BRFSS, 1985

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1986

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1987

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1988

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

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1989

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1990

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1991

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1992

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults
BRFSS, 1993
(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1994

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1995

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1996

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1997

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1998

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 1999

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 2000

(*BMI ≥30, or ~30 lbs overweight for 5’4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 2001

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 2002

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults
BRFSS, 2003

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 2004

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

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 2005

(*BMI ≥30, or ~30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 2006

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults
BRFSS, 2007

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults

BRFSS, 2008

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Obesity Trends* Among U.S. Adults
BRFSS, 2009
(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” woman)

Source: U.S. Centers for Disease Control and Prevention (CDC)
Diabetes trends among U.S. adults

The costs of obesity

- According to the CDC, the medical costs attributable to obesity in the U.S. are estimated to be $147 billion per year.

- By 2030, if obesity trends continue as shown, 86% of adults will be overweight or obese and total attributable health-care costs will be $860-956 billion per year.

- City of Dallas: medical costs of an obese city employee are up to 6 times that of a normal weight employee.
Risk factors contributing to obesity and chronic disease

Risk Factors must be addressed:

- Poor diets (food and beverages)
- Physical inactivity
- TV viewing / Screen time
- Not breastfeeding
Physical activity recommendations

- **Recommendations:**
  - Adults: **150 minutes of moderate activity** or **75 minutes of vigorous activity** per week
  - Children: **60+ minutes of physical activity** daily

- **Less than half** of US adults meet recommendations
People have not changed – our environment has

If you go with the flow, you get overweight or obese
Design and physical activity

Creating or improving access to places for physical activity
- Can result in **25% increase** in number of people who exercise at least 3 times per week

Creating a more enticing and walkable public realm
- Can result in **35-161% increase** in physical activity (e.g. walking)
Co-benefits: Strengthen our economy

More compact development patterns save money on avoided infrastructure costs

<table>
<thead>
<tr>
<th></th>
<th>Water &amp; Sewer Laterals Required</th>
<th>Water &amp; Sewer Costs (billions)</th>
<th>Road Lane Miles Required</th>
<th>Road Land Miles Costs (billions)</th>
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<tbody>
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<td>Sprawl Growth Scenario</td>
<td>45,866,594</td>
<td>$189.8</td>
<td>2,044,179</td>
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<td>Compact Growth Scenario</td>
<td>41,245,294</td>
<td>$177.2</td>
<td>1,855,874</td>
<td>$817.3</td>
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<td>Savings</td>
<td>4,621,303</td>
<td>$12.6 (10.1%)</td>
<td>188,305</td>
<td>$109.7 (6.6%)</td>
</tr>
</tbody>
</table>

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

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

Source: Political Economy Research Institute: June 2011
Creation of the Active Design Guidelines

- Brainstorming and finding solutions together through Fit City convenings
- Multi-agency initiatives
- Public & Private sector partnerships
- Finding synergies: Health, Sustainability, Economic development, Universal accessibility

Fit-City: Promoting Physical Activity Through Design

Access the Active Design Guidelines: www.nyc.gov/adg
Creation of the Guidelines

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    Built Environment Coordinator

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    Former Urban Fellow, Division of Planning and Sustainability

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Thanks to all the design practitioners and organizations who participated in the 2009 Design Charrette to help test the Guidelines prior to its publication.

*We also thank the many city agencies that gave input including the Depts of Parks and Recreation, Buildings, Housing Preservation and Development, School Construction Authority, Aging, and Mayor’s Offices of Long-Term Planning and Sustainability, and of People with Disabilities.*

Access the Active Design Guidelines:

www.nyc.gov/adg
Evidence-based Strategies targeting policymakers, architects, urban planners, building owners

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

Access the Active Design Guidelines: www.nyc.gov/adg
Characteristics of High-Need Areas identified in *Going to Market Study*:

- Poor fresh food access
- Low car ownership
- Low consumption of fruits and vegetables
- High rates of diet-related disease
- Low household incomes
- High population density
- Capacity for new grocery stores

Source: New York City Department of City Planning
Higher Rates of Diabetes & Obesity Correlated with Unhealthy Eating Areas

Percent residents with:

<table>
<thead>
<tr>
<th>DIABETES</th>
<th>OBESITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.8 - 5.9</td>
<td>8.8 - 18.3</td>
</tr>
<tr>
<td>6.0 - 9.9</td>
<td>18.4 - 23.7</td>
</tr>
<tr>
<td>10.0 - 11.2</td>
<td>23.8 - 26.7</td>
</tr>
<tr>
<td>11.3 - 18.3</td>
<td>26.8 - 31.6</td>
</tr>
</tbody>
</table>

Source: NYC Department of Health and Mental Hygiene
AECOM: NYC Full Service Grocery Store Analysis
19 neighborhoods studied

Partners
NYC Department of Health and Mental Hygiene
NYC Food Policy Coordinator
NYC Department of Planning
NYC Economic Development Corporation

CONCLUSION
Retail demand in study area could support as much as 1.1 million additional square feet of full service grocery store space
FRESH Program Incentives

Zoning Incentives –
Department of City Planning

- Additional Development Rights
- Reduction in Required Parking
- Larger As-Of-Right Stores in Light Manufacturing Districts

Financial Incentives
Economic Development Corporation

- Real Estate Tax Reductions (25 years)
- Sales Tax Exemption
- Mortgage Recording Tax Deferral
First FRESH store opening in August 2011

FRESH Program Goal of 6 Stores in 5 Years has been exceeded
DOT closes Park Avenue to traffic from Brooklyn Bridge to Central Park and the Upper East Side on Saturdays in August.

Evaluation:
- Average amount of physical activity from distances walked, ran, biked on route: **>40 minutes of vigorous physical activity, or >70 minutes of moderate physical activity**
- **24%** of people were those who didn’t meet PA Recs
- **87%** of participants got to event by active modes
- Residents from outside Manhattan and from high needs neighborhoods underrepresented
PlayStreets: Increasing active play space for children

Street Closures Initiative

• Increase children’s accessibility to active play spaces

• Streets are closed to traffic at least one day per week during the summer or school year

• Goals explicitly set in PlaNYC (Mayor’s policy document for long-term planning and sustainability)
PlayStreets Partners

- NYC Department of Health & Mental Hygiene → PlayStreets Coordinator
- Department of Transportation
- Department of Parks and Recreation
- Strategic Alliance for Health
- Transportation Alternatives
- Mayor’s Office of Long-term Planning & Sustainability
- Participating NYC Schools and community groups

*PlayStreets are operated by community organizations, garden groups, Department of Parks and Recreation, and schools*
Street Closures: Evaluation

There are plenty of playspaces in my neighborhood for children to use.

The playstreet helped my children stay physically active.

I believe that having this playstreet is important for my children.

I would bring my children back to this playstreet.

The playstreet is a safe place for my children to play.

My children had fun at the playstreet today.

Of all the playspaces available in my neighborhood, this playstreet is one of the best.
Street Closures: Evaluation

Percentage of respondents who attended PlayStreets previously: 80.5%

Average number of visits this year among respondents who attended previously:
- Jackson Heights: 13 (Range: 1 – 30)
- St. George: 5 (Range: 2.5 – 7)

Most likely activity if children had not come to the Playstreet:
- TV or other inside activity: 52%
- Outdoor activity: 38%
- Indoor or outdoor activity equally likely: 10%

Average length of time children stayed at the Playstreet:
- Jackson Heights: 1 hour, 21 minutes (Range: 15 minutes – 3.5 hrs)
- St. George: 2 hours, 36 minutes (Range: 1 – 3 hrs)
- Bedford-Stuyvesant: 2 hours, 30 minutes (Range: 2 – 3 hrs)
Intersectoral Initiatives on the Built Environment

KEY PROCESS LESSONS LEARNED:

• The Need for **Intersectoral Partnerships**

• **Complementary Roles** of Health and Non-Health Partners
  
  – Health: Present the available research-based evidence and the epidemiology of disease; organize forums/conferences for dialogue with other sectors
  
  – Other Sectors like Design and Construction, Transportation, City Planning, Economic Development: Ideas of what’s feasible in the current local context; identify opportunities and mechanisms, including and especially synergistic efforts
  
  – Health: Support development and implementation of intersectoral initiatives; provide resources for coordination of meetings and follow-up; provide assistance in planning and evaluation
  
  – Other Sectors like Design and Construction, Transportation, City Planning, Economic Development: Co-leadership and participation in the initiatives
  
  – Researchers: Assist with evidence reviews and synthesis, and evaluation research

• Use **Evidence-Based and Best-Practice Strategies**
Partnering with community health to create livable communities

Derek Miller, AICP, City of Omaha Planning Department
Rail-Volution, October 18, 2011 Washington DC
To create a physical and cultural environment that maximizes the ability of all residents of Omaha and Douglas County to eat healthier foods and to be physically active, at any time and in any place. We are creating a community where the healthy choice is the easy choice.

- Safe Routes to School
- Bike Walk Omaha
- Farm-to-School
- Movin’ After School
- Healthy Stores Omaha
- School Gardens
- Partners for a Healthy City
Omaha

Counting Crows

August and Everything After
Warren Buffet
Union Pacific
ConAgra Foods
142 out of 182
Commuter Transportation

Greater Omaha’s transportation infrastructure is equally efficient at getting people where they need to be. Recent investments in the region’s interstate system ease morning and evening commutes and have helped reduce the time employees spend behind the wheel. In fact, Greater Omaha has an average one-way commute of 19.4 minutes.

In addition, the area’s Metro provides efficient and affordable bus service throughout Greater Omaha. Metro buses travel over six million miles annually and provide transportation for more than 5.2 million customers. A number of companies provide the service as a courtesy to their employees. Six transit information centers and more than 4,000 bus stops are conveniently located throughout Greater Omaha.
3 Points

- Value of Partnerships
- Institutionalize Health into the process
- Creating Change through Momentum
Partnerships

Creating a culture in which there is enhanced collaboration, coordination and a shared desire to achieve greater effectiveness.
Highlighted Partners
- Omaha by Design (OBD)
- Live Well Omaha

Omaha’s Public Private Partnerships

Douglas County / City of Omaha
Omaha by Design is a civic planning organization dedicated to the development, implementation and monitoring of urban design and environmental public policy in the metro. The organization facilitates partnerships between the public, private and philanthropic sectors to execute projects that improve the quality of Omaha's natural and built environments.
Environment Omaha (OBD)

- Natural Environment
- Urban Form and Transportation
- Building Construction
- Resource Conservation
- Healthy Communities
Live Well Omaha is the long-term collaborative effort of individuals and organizations representing multiple sectors (including elected officials from all levels of government, schools, health care professionals, faith-based and community-based organizations and private sector companies) who share a vision to improve the overall health of area residents and position Omaha as a thriving community well into the future.

1) Birth and Evolution

2) 17 members to over 47

3) Three roles we serve
   1) Purveyor of Data
   2) Catalyst for achieving community health
   3) Infrastructure
OmahaBcycle
Partnerships - Lessons Learned

- Non-Profits as Referees / Facilitators
- Understanding Partner Roles / Expectations & Obligations
- Small but mighty
- Know your environment
- Outreach / Media
- Community and Political Will
Institutionalize - TMP 2035
TMP2035 Goals

- provide **balanced options for enhanced mobility**
- **attain a safe and healthy environment**
- **create livable and connected neighborhoods**
- **promote economic returns with fiscal sustainability**
The project criteria presented here are intended to express measures of effectiveness for proposed candidate projects with regard to the four Community Goals developed through the initial public and stakeholder outreach efforts of the Transportation Master Plan. These are to be used principally to assign basic scores to projects, allowing them to be ranked in order of the score as a first step at prioritizing projects. The actual prioritized list is likely to differ from this list and will be refined based on staff and stakeholder input later in the process, but these are the metrics we will use to understand a particular project's responsiveness to the four TMP community goals. To determine scores, values of 1 to 5 will be assigned to a candidate for each metric (and the ways in which these values are assigned are explained on the tables on the following pages). Within each goal, the sum of these values would be divided by the total number of metrics for that goal. This is intended to keep one goal from being weighted over another; for example, if the mobility goal had only four metrics and the healthy community goal has six, the total score for mobility would be divided by four and the score for healthy community by six, meaning each goal would thus yield a maximum composite score of 5 and thus each goal has equal importance in being met. The merged score for each goal is then added, yielding a maximum project score of 20.

**EXAMPLE: Candidate Project A**

<table>
<thead>
<tr>
<th>GOAL 1</th>
<th>GOAL 2</th>
<th>GOAL 3</th>
<th>GOAL 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>METRIC</td>
<td>SCORE</td>
<td>METRIC</td>
<td>SCORE</td>
</tr>
<tr>
<td>Metric1.1</td>
<td>4</td>
<td>Metric2.1</td>
<td>1</td>
</tr>
<tr>
<td>Metric1.2</td>
<td>5</td>
<td>Metric2.2</td>
<td>5</td>
</tr>
<tr>
<td>Metric1.3</td>
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<td>5</td>
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<td>Metric1.4</td>
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<td>Metric4.4</td>
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<td>Metric1.5</td>
<td>4</td>
<td>Metric3.5</td>
<td>4</td>
</tr>
<tr>
<td>Metric1.6</td>
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<td>Metric3.6</td>
<td>1</td>
</tr>
<tr>
<td>Metric1.7</td>
<td>3</td>
<td>Metric4.7</td>
<td>1</td>
</tr>
</tbody>
</table>

SUM OF ALL COMPOSITES (overall project score for ranking) = 11.42
### GOAL 2: Attain a safe and healthy environment

<table>
<thead>
<tr>
<th>Name and description of metric</th>
<th>How scores are assigned</th>
<th>What this metric can be used to calculate/estimate</th>
</tr>
</thead>
</table>
| **2.1 - Operational Safety**  | 1 - tends to increase crashes on bike/ped corridor  
2 - tends to increase crashes  
3 - no safety effect  
4 - tends to reduce crashes  
5 - tends to reduce bike/ped crashes | |
| Intersections with a high number of crashes were identified throughout the city. Often, the likelihood of accidents to occur at an intersection can be significantly reduced through proper design. Project corridors that included "critical intersections" would include designs techniques to reduce future accidents. "Critical Intersections" were identified as locations of greater than 20 accidents per year. |
| **2.2 - Walking and Biking Accessibility** | 1 - Projects performing in the bottom fifth in providing connections to community facilities  
2 - 2nd lowest fifth  
3 - Middle fifth  
4 - Second highest fifth  
5 - Highest fifth | Overall walkability and propensity for walk trips. Similar efforts have used street connectivity and the presence of alternative transportation forms as a basis for measuring health indicators (such as average body mass index). |
| Connections for pedestrians and bicyclists to reach parks, schools and other community facilities promotes safe opportunities for exercise, increase the number of children walking to school and the choice to complete shorter trips by means other than the automobile. Using GIS, a quarter mile buffer was drawn around community facilities (school, libraries, parks, recreation centers). This process measures the number of these buffer areas that intersect with the project, normalizes this number on a per-mile basis, arranges the projects in descending order by this number, and divides the entire project list into quintiles. |
### 2.3 - Access to Healthy Food Sources

Considers access to full-service grocery stores, community gardens and farmers markets as a source of fresh food that contributes to a balanced, healthy diet.

Projects that shorten length, provide transit service or otherwise facilitate access to grocery stores.

- 1 - degrades access to quality food in vulnerable community
- 2 - degrades access
- 3 - no effect
- 4 - improves access
- 5 - improves access in vulnerable community

### 2.4 - Impacts of Vehicle Delay

This metric utilized quantitative assessment of travel demand model outputs to estimate vehicle delay from volume/capacity ratios. Change in delay by implementing the candidate project was calculated from the 2035 ‘trend’ scenario.

1 - adds delay to congested corridor (2010 LOS E or F)
2 - adds delay
3 - neutral
4 - decreases delay
5 - decreases delay to congested corridor

Reduction in fuel consumption and emissions associated with idling (see Metric 1.2).

### 2.5 - Impacts of Vehicle Miles Traveled

Using output from the travel demand model, the percent change in Vehicle Miles Traveled (VMT) was determined from the 2035 trend model to determine the ability to reduce trips.

1 - worst performing scenario
2 - mid-range scenario
3 - best performing

Estimated carbon footprint and air quality impacts. Based on EPA data, 349 lb of CO₂ are emitted annually per VMT.

### 2.6 - Impervious Surfaces

This metric is used primarily for street projects and assesses the estimated impervious surface area of the traveled roadway for a project relative to the project street’s current condition. Area is estimated by multiplying a total number of travel lanes by an assumed average lane width and the overall project length.

1 - more asphalt
2 - more asphalt, 2010 congested corridor
3 - no more asphalt
4 - less asphalt

Estimated impacts to stormwater collection and treatment systems. Based on Omaha’s annual rainfall (30 inches), each square foot of impervious surface requires the treatment of 4.67 gallons of water. Depending on the treatment method, this translates to energy consumption, land consumption, and/or additional costs. It can also be used to estimate estimated changes to urban heat island effect. Impervious surfaces also contribute to urban heat island effect and building energy usage, with an estimated 1.6% increase in building energy consumption for every degree increase in ambient temperature.
3.3 Commercial and Business Streets

Streets serving commercial districts in the city have a high level of need for access to private property. Some of these districts, such as in the cross-section illustrated here, are traditional, neighborhood-serving business districts that feature a more urban form of building placement and relationship to the street. The smaller lot patterns typical of these commercial areas suggest that on-site parking potential is very limited, in turn underscoring the importance of providing on-street parking.

The constrained nature of some commercial corridors means that not all street elements may be readily fit in available right of way. If added travel lanes beyond the configuration shown here are needed due to travel demand, designers may be able to fit these lanes by eliminating parking and reducing the bicycle lane widths slightly.

As with any cross-section design in these guidelines, the primary needs of the street should be explored and understood when making design decisions; any needed tradeoffs arising from right-of-way constraints should be addressed with these needs in mind.

BALANCE OF DESIGN FACTORS

**LIVABILITY**
These typically feature sidewalk and pedestrian activity, suggesting a priority for more clear space for sidewalk. On-street parking is important for businesses with limited on-site parking potential.

**ACCESS/MOBILITY**
Access points should be used for structured/shared parking as much as possible. Two-way left turn lane may be needed in places where driveway consolidation/access management has not been implemented.

**SAFETY**
Designer should be aware of high potential for interaction between modes and be responsive to potential conflicts: mark crosswalks clearly, and bicycle lanes should allow ample space to be free of cars and car doors.
TYPICAL SECTION
62'-0" - 5 LANE CONCRETE PAVEMENT

NOTES
1. CONSTRUCT CONCRETE PAVEMENT IN ACCORDANCE WITH SECTION 900 OF THE STANDARD SPECIFICATIONS.
2. SEE STANDARD PLATE 1-01 FOR JOINT DETAILS.
3. WHEN BOTH LANES ARE PLACED AT THE SAME TIME THE
   LONGITUDINAL JOINT SHALL BE THE SAWED TYPE.
   THE KEYED TYPE LONGITUDINAL JOINT SHALL BE USED WHEN AN
   ADJACENT LANE IS NOT PLACED AT THE SAME TIME.
4. MAXIMUM SPACING FOR SAWED TRANSVERSE CONSTRUCTION JOINTS
   SHALL BE 12'.
5. TRANSVERSE JOINTS SHALL BE ALIGNED TO COINCIDE WITH THE
   CENTERLINE OF INTERSECTIONSreira WHEREVER POSSIBLE.
6. ALL SAWED TRANSVERSE JOINTS SHALL BE CONTINUOUS ACROSS
   THE PAVEMENT AND EXTEND THROUGH CURVES.

LEGEND
LONGITUDINAL JOINT
SAWED TRANSVERSE CONTRACTION JOINT
KEYED JOINT - LUG-OUT TYPE
NO. 4 TIES AT 24" INTERVALS

CITY OF OMAHA PUBLIC WORKS DEPARTMENT
STANDARD PLATE 1-32
ISSUE DATE: JANUARY 27, 2009
Institutionalize – Shared Vision

- Changing the internal culture -
#1 Bike City: Minneapolis

The unforgiving and frigid city of Minneapolis is the country’s top spot to be an urban cyclist. Now we just have to figure out why.

By Steve Friedman

Tags: Bike-Friendly Cities

This is the advice I am given by a resident of the metropolis that Bicycling has proclaimed America’s Best Bike City: If I happen to be riding and my freewheel freezes up, which it tends to do here on the grim and purgatorial north-central plains of Minnesota, “Don’t just stand there and stick your thumb out. Flip your bike over. People will see that and feel sorry for you and help. People around here know that if you get stuck in the cold, you could die.”

The man who divulges this gem is teaching a class on winter riding to me and seven other men and women ranging in age from 20 to 70. The mere need for such a class to exist should preclude Minneapolis, Minnesota, from attaining utopian status among cyclists. The subarctic climate here is so awful that it has spawned skyways because people generally don’t even want to walk outside during the...
Institutionalize - Future

- CDC-Community Transformation Grant
- CDC-HIA Grant
Creating change through momentum
We go where summer is!

Now that great weather has arrived, there’s no better time to start taking advantage of the convenient bus routes offered by Metro. Year-round, Metro is a great transportation option!

System Bus Map
View the complete route map of the entire Metro Bus system, and get details on specific routes.
> see map

Updated Signs
Starting May 7th, Metro will be replacing every bus stop sign in the city and marking transfer points.
> learn more

Bring Your Bike
Did you know that all Metro buses have a convenient rack for your bicycle? It’s true — and your bike rides for free!
> learn more

Purchase Tickets
Beginning on September 6, 2011, ticket sales at the Metro facility will be temporarily suspended due to building construction. Tickets may be purchased online, or for alternative locations where tickets may be purchased please click the link below. We apologize for any inconvenience that this may cause, and thank you again for riding Metro.
> learn more

9 New Buses
Metro introduces into service 9 new buses manufactured by New Flyer of America.
> learn more
Other Partners creating momentum
The Reviving Downtowns
Smaller cities and towns are remaking themselves as hubs for the knowledge economy.

Livable cities draw creative people, and creative people spawn jobs. Some places you’d never expect—small cities not dominated by a university—are learning how to lure knowledge workers, entrepreneurs, and other imaginative types at levels that track or even exceed the US average (30 percent of workers). Here are some surprising destinations from the data of the Martin Prosperity Institute, directed by Richard Florida, author of The Rise of the Creative Class.

Midtown Crossing, situated in Omaha, has seen a revival of the midtown area, which had been home to pleasant parks and a pedestrian-friendly street. The project involved the renovation of old buildings and the addition of new retail and residential spaces, making it a popular destination for both tourists and locals.

Downtown
For years, the downtown area was considered a ghost town, with empty stores and closed businesses. A new development project, including new restaurants and shops, has brought life back to the area. The project included the renovation of the historic buildings and the creation of a pedestrian-friendly street.

Case Study:
Omaha, Nebraska

It’s only the 42nd-largest city in the US, but over the past two decades, Omaha has been transformed into one of the Midwest’s most vibrant cultural hubs. Here’s how the rebirth happened, starting in the ’80s.

Phase 1: 1991-1994
It started with a food festival. The Omaha World-Herald announced a “Great Omaha Food Festival” in 1991, which featured local food vendors and attracted a large crowd. The event was so successful that it continued for several years, inspiring the creation of a permanent food market.

Phase 2: 1995-2001
This was the era of the arts. The Nebraska City of the Arts was established in 1995, and the city saw a surge in cultural events and venues. The Omaha Performing Arts Center was built, and the city hosted the first Omaha Film Festival.

Phase 3: 2002-2007
Omaha learned to cater to the younger crowd. The city focused on creating a family-friendly atmosphere, with events like the Omaha Film Festival and the Omaha Children’s Museum.

Phase 4: 2008-2010
Locally, the city added more green spaces, particularly in the Midtown Crossing area. The city also started a farmers’ market, which became a popular destination for locals and tourists alike.

The Slowdown development
As this complex is known—after the indie rock club that anchors it—was completed in 2007 on an abandoned lot owned by Union Pacific Railroad. Funding for the $80 million project came from Fannie Mae and the city. In 2009, it was called "Slowdown the best club in America."
I Ride.
SHARE THE ROAD
www.iridedouglascounty.org
He’s more important than whatever you’re late for.

SHARE THE ROAD WITH CEDRIC

Be visible
Be aware

I Ride.

www.iridebecause.org

Made possible by funding from the Department of Health and Human Services.
**ModeShift Omaha**

[Home] [About] [Get Involved!] [Why We Need Transportation Choice]

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**Our Mission**

ModeShift Omaha supports greater choice in urban transportation. As the City of Omaha prepares its Transportation Master Plan (TMP), we are the voice of citizens interested in seeing a more navigable and livable Omaha.

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**Blogroll**

- FastLane [US DOT blog]
September 15th, 2011
HEARTLAND
ACTIVE TRANSPORTATION SUMMIT
REGISTER TODAY!

PROFESSIONAL SUMMIT
SEPTEMBER 30
8:00 AM-4:00 PM
SCOTT CONFERENCE CENTER
6450 PINE STREET // OMAHA

COMMUNITY SUMMIT
OCTOBER 1
9:00 AM-4:00 PM
UNO - CPACS BUILDING
6001 DODGE STREET // OMAHA

KEYNOTE LUNCHEON with
JIM OBERSTAR
Friday, SEPTEMBER 30
11:30 AM - 1:00 PM

As an eighteen-term Congressman representing Northern Minnesota’s Eighth District from 1975 to 2011, during which time he served as a member and chair of the House Transportation and Infrastructure Committee, Jim Oberstar has been at the forefront of Federal transportation policy making. He played a key role in crafting some of the most important transportation legislation of the past 40 years, including the seminal transportation re-authorization bills ISTEA (1991) and SAFETEA-LU (2005), the latter providing for Federal funding of active transportation for the first time. Oberstar is an avid cyclist and supporter of active transportation.

To REGISTER or LEARN MORE, visit:
www.mapacog.org/hats-2011

QUESTIONS? CONTACT:
hats@mapacog.org // (402) 444-6866

SUMMIT SPONSORS

PHOTO: Margaret Bourke-White
“Life in the 20-Minute Neighborhood”

A first-of-its-kind interactive visioning workshop for sustainable transportation and place-making in Greater Baltimore.

Come learn about new thinking on integrating transit, bicycling, and walkable places in ways that can create a seamless, connected network of livable communities in Baltimore. This half-day event will include presentations by leading practitioners and a hands-on workshop to help shape and advance sustainable solutions in the new economic reality of doing more with MUCH less.

WHEN: Thursday, April 21st, 9 AM to 12 PM.
WHERE: The American Visionary Art Museum, 800 Key Highway, Baltimore, MD 21230 (in the Tall Sculpture Barn)
COST: Free!
RSVP: Space is limited and registration is required by sending an email with your name and organization (subject line “EnvisionBaltimore”) to rsvp@tndplan.com.
The bicycle lane on Dexter Ave N in Seattle is possibly the most heavily used bike lane on the west coast. This is how we wish it looked. This is a copyrighted image from the Bicycle Alliance of Washington. Please respect our copyright. Suitable for framing posters of this image and two similar ones are available for a donation to BAW's bicycle advocacy efforts. info@bicyclealliance.org
Creating Healthier Communities:
Built Environment & Health Partnership
Kate Rube, Active Design National Training Manager
Rail~volution | October 18, 2011
- Supported by CDC Communities Putting Prevention to Work Mentoring grant
- Partnership between NYC DOHMH, AIANY, and 14 communities
- All communities are recipients of CPPW grants

Boston MA ~ Cherokee Nation OK ~ Chicago IL ~ Cook County IL ~ Douglas County NE ~ Jefferson County AL ~ King County WA ~ Louisville KY ~ Miami-Dade County FL ~ Multnomah County OR ~ Nashville TN ~ Philadelphia PA ~ Pima County AZ ~ San Diego CA
Dr. Karen K. Lee
Built Environment Program Director
NYC DOHMH

Kate Rube
Active Design National Training Manager
AIANY

Healthy LEED and Green Development Coordinator
Department of Design + Construction/DOHMH

Subcontractors
- NYC Department of City Planning
- Project for Public Spaces
- Dr. Gayle Nicoll, Ontario College of Art and Design (OCAD University)
- Hutton Associates
- Public Health Law & Policy Center

Goals of the Partnership
- Help partner communities achieve CPPW Built Environment & Health goals
- Disseminate lessons learned and best practices from NYC and other communities
- Help build the capacity and sustainability of built environment and health work
Community Workplans: Common Goals

Increasing **walking & bicycling rates**

Increasing **access to, availability of, and use of parks & recreation spaces**
Community Workplans: Common Goals

Increasing the availability of **healthy, fresh, and local food options**

Increasing **opportunities for physical activity at the building scale**

Increasing **physical activity in & to/from schools**
Structuring Built Environment & Health Partnerships

Funding Staff

- Health Department
- Planning /Parks Departments
- Transportation Department
- Building /Housing Departments
- Other Organization
- Mayor’s Office
Partnership Themes & Community Needs

Making the Case
- Quantifying Costs & Benefits
- Compiling & Using Data

Outreach
- Building Political Support
- Engaging Constituencies: Transportation & Business Communities

Institutional Change
- Creating Interagency Partnerships
- Institutionalizing Work in Health and other Departments

Model Policies
- Transportation
- Urban Planning

Themes & Community Needs
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- Making the Case
Partnership Activities Coordinated by NYC Team

- Monthly Calls
- Quarterly Webinars
- In-person Trainings (2)
- LEED Physical Activity Innovation Credit TA
- Individual TA
Partnership Activities Coordinated by NYC Team

**Monthly Calls**
- Interagency Partnerships  
  April 2011
- Quantifying Costs & Benefits  
  June 2011
- Sustaining Health & BE Work  
  July 2011
- Using Health Data & BE Data  
  August 2011
- NYCDOT Data-driven Transportation Safety Planning  
  August 2011

**Quarterly Webinars**
- Creating Healthy Communities Through Design  
  June 2011
- The Benefits of Active Design for Business & Real Estate Development –  
  September 2011
- Becoming a Fit City: Top Opportunities in Healthy, Active Design  
  November 2011
- Increasing Access to Recreation & Park Space  
  TBD

Webinar recordings and presentations at: www.nyc.gov/adg
• Includes **population health profile**: Obesity, chronic disease, life expectancy, disparities by race

• **24 health-supportive plan objectives**

• Cites health benefits, includes **indicators to track progress** and increase accountability
• Explains evidence base for comprehensive plan objectives

• Consolidates health-related content and reframes from health perspective

• Lays out tools, plan for integration of HIA into District Plans
Proposed Zoning Code
→ Increasing physical activity and improving access to healthy food

- Mixed-Use Districts
- Transit-Oriented Development nodes
- Parking maximums
- Incentives for fresh food markets
- Incentives for infill
- Requirements for sidewalks, pedestrian connectivity, bicycle parking
- Urban agriculture, farmers’ markets permitted as-of right
District Plans

- Incorporating physical activity and health food/beverage access into plan recommendations

- Conducting Health Impact Assessments of major projects, policy proposals, zoning remappings

- Healthy Planning Toolbox
  - PHILATool
  - Walkability Assessment Tool
  - Bicycling Environmental Audit
### PHILATool
(The Planning & Health Indicator List & Assessment Tool)

<table>
<thead>
<tr>
<th>Citywide Plan Objective</th>
<th>Indicators</th>
<th>Agencies</th>
</tr>
</thead>
</table>
| 4.2.1 Implement a Complete Streets Policy for the city to ensure that the right of way will provide safe access for all users | Linear miles of Complete Streets as defined by forthcoming Complete Streets Manual  
Linear miles of auto travel lane → bike lane conversions  
Linear miles of dedicated transit lanes | MOTU, Streets  
MOTU, Streets  
MOTU, Streets, SEPTA |
| 4.2.2 Improve safety for pedestrians and bicyclists and reduce pedestrian and bicycle crashes | Number of improvements implemented as recommended in the Philadelphia Pedestrian and Bicycle Plan  
Linear miles of dedicated on-street bike lanes  
Number of pedestrian bicycle and pedestrian injuries and fatalities | MOTU, PCPC  
MOTU, Streets  
PennDOT, Police |
| 4.2.3 Expand on- and off-street networks serving pedestrians and bicyclists             | Linear miles of on- and off-street trails, sidepaths, waterfront trails planned/constructed/completed  
Linear miles of dedicated on-street bike lanes, buffered lanes, cycle tracks  
Linear footage of new sidewalks added  
Number of on-street bicycle parking stations | MOTU, Streets, PCPC, SRDC, DRWC  
MOTU, PCPC, CCD  
MOTU, Streets  
MOTU |
| 4.3.2 Control automobile congestion through traffic management and planning            | Number of parking spaces in off-street parking garages in Center City  
Street meter occupancy  
Traffic volume  
Automobile modeshare | PCPC  
MOTU, PPA  
PennDOT, MOTU  
PCPC |
Using Health Impact Assessments: Nashville, TN

Evaluating the health impacts and benefits of EasyRide, Nashville’s commuter benefits program
EasyRide HIA Partnership

Jimmy Dills, MPH, MUP
HIA Coordinator, MPHDD

Eric Beyer
Program Manager, EasyRide, MTA

Holly Karlman, MPH
Healthy Workplace Coordinator, MPHDD

Mary Vavra, RLA, ASLA
Board of Directors, Transit Now Nashville
A combination of procedures, methods and tools that systematically judges the potential effects of a policy, programme or project on the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects.

- International Association of Impact Assessment (2006)
Employers may:

- Pay for employees’ transit or vanpool fares
- Allow employees to pay for transit or vanpool fares with pre-tax salary
- Use a combination of these two methods
• Project team identified
• Health topics:
  • Physical Activity
  • Injuries
  • Air Quality
  • Others to lesser extent
• Basic research question:
  • Who currently uses EasyRide and how?
• Focus on Metro, State, and Vanderbilt
• Ridership data and surveys
• Stakeholder input forums
Renewal surveys: preliminary results

- 73% drive alone if they don’t use EasyRide
- >98% have easy access to a car
- 71% say EasyRide has increased their ridership; 86% of these said they previously rode transit infrequently or had never ridden
- 53% think riding transit has a positive impact on their health, increases to 74% for regular riders
- 31% of always & regular riders are obese, compared to 36% of people who ride occasionally or less
Renewal surveys: Physical Activity

• 82% of EasyRide users walk or bike for part of their trip

• Average 10.8 minutes of Physical Activity if at least one part of trip was walking or biking
  • Twice a day = 21.6 minutes of physical activity

• Average 16.6 minutes of Physical Activity if both parts of trip were walking or biking
  • Twice a day = 33.2 minutes of physical activity

• So 20% of EasyRide users meet CDC recommendation for Physical Activity from commuting alone
What do Health Departments/Professionals Bring to Built Environment Processes?

- Access to Data & Data Analysis
- Evidence-based Approach
- Credibility on Health & Safety Issues
- Connections to New Constituencies
- Potential New Sources of Funding
- Assistance with Evaluation of Health Outcomes
Involving Health Departments/Professionals: Opportunities in Built Environment

Plan Development
- Transportation, Planning, Parks, Buildings, etc.
- Long and short term

Programs
- Increasing Physical Activity
- Healthy Food Access

Other Processes
- Reports; Ongoing Committees
- Evaluation; Indicator Tracking
Moving Forward: Collaboration on Health and Built Environment Issues

- Supporting intersectoral partnerships between health and other departments for healthy Built Environment work
- Creating institutionalized collaborations
- Combining funding streams across agencies
- Using Health & Built Environment indicators
- Documenting and influencing the co-beneficial outcomes of this work
Thank you!

Questions? Thoughts?

Kate Rube
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212-358-6118