Fit-City 4:

Promoting Physical Activity through Design

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Cover Photo: Bleecker Street, Rick Bell

INTRODUCTION BY SHERIDA PAULSEN, *FAIA*

2009 President, AIA New York

Four years ago – New York City did not have dedicated bike lanes, Times Square was clogged by traffic, and staircases were invisible elements of our building environments. The Fit City conferences have brought together public health professionals with the design community, and neighborhood-scale design opportunities that further the Fit City agenda have become the front-page topics (both print and web) in the public eye. The simple design changes that can help to reduce chronic illnesses associated with obesity and inactivity, especially diabetes, heart disease and some cancers, are essential contributions to the livable city that PlaNYC envisions for 2030. The conferences have explored initiatives from the international design playbook, and have helped to build connections that in turn have helped to spur the changes that we now take for granted.

Our civic goals for our streets, buildings and parks have been expanded to include design excellence and sustainability during this administration, and the importance of physical well-being will be added to that agenda with the release of the New York City *Active Design Guidelines*. The *Guidelines*, prepared by the City of New York, set forth the many avenues available to architects, landscape architects, interior designers, and urban planners to present healthy and feasible design options to our clients, both public and private. The *Guidelines* also clearly illustrate the city's intentions to literally walk the walk, or bike the bike!

INTRODUCTION BY RICK BELL, *FAIA*

Executive Director, AIA New York

During the past three years, we have heard from those whose policies, planning, and projects have reshaped the promotion of physical activity through design. Released in January 2010, the City of New York's *Active Design Guidelines* set the ground rules for a less sedentary society. Through a participatory process involving many city agencies and individual voices, including a workshop charrette held at the Center for Architecture, the *Guidelines* took shape.

Our Fit City Conferences have been defined by intellectual flexibility and frankness. As is said in Catalan, "To ride a bicycle, you can't have a straight back."

Fit City 4 takes the outgrowth of scientific research on obesity and physical activity and shapes urban policy to promote design and planning principles that lead to better health. We will learn about the development of the *Guidelines* that speak to how designers and public health professionals, working together, can create healthier and more livable communities.

OVERVIEW OF THE ACTIVE DESIGN GUIDELINES

Mounting scientific evidence demonstrates the impact of environmental design on physical activity and healthy eating. Designers have an essential role in addressing the rapidly growing epidemics of obesity and related chronic diseases.

Obesity and with it type 2 diabetes are now epidemic in New York City, and are the two health problems growing worse rapidly. The rise in obesity is tied to the population's over-consumption of calories and under-expenditure of human energy, both of which are shaped by the built environments in which we live, work, and play. Today, architectural and urban design too often support unhealthy rather than healthy diets, and sedentary rather than active daily lifestyles. **The *Active Design Guidelines* aim to reverse these trends, by providing architects, planners, and urban designers in New York City and beyond with a manual for creating healthier buildings, streets, and urban spaces.**

Active Design is environmental design that encourages stair climbing, walking, bicycling, transit use, active recreation, and healthy eating. **Based on the latest academic research as well as best practices and cost-effective solutions developed in the field, the *Active Design Guidelines* suggest cost-effective ways to contribute toward the vision of a more livable and hospitable New York City promoted in Mayor Bloomberg's Design + Construction Excellence Initiative. *The* Guidelines *can be accessed at http://www.nyc.gov/adg.***

The Guidelines have four 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**

Why do we need the Guidelines?

Today, architects, urban designers, and planners can help address some of the most urgent and widespread epidemics of our time, obesity and its related diseases, by implementing the strategies contained in the *Active Design Guidelines*. Just as design professionals are increasingly embracing green building as an objective, so too should they consider the potential effects of their designs on public health and wellbeing.

Who will use the Guidelines?

The *Active Design Guidelines* address all who have a role in the design and construction of the built environment. This encompasses professional designers such as planners, urban designers, architects, landscape architects, and engineers; project sponsors such as government agencies, building owners, and private developers; building managers; and user groups, including bicyclists, city residents, and building occupants. The *Guidelines* will also assist architectural, planning, and design educators seeking to incorporate key health-promoting design factors into student projects and curricula. Health professionals can promote use of the *Guidelines* in their own facilities and communities. Researchers can use the *Guidelines* to identify areas of practice needing more research.

How should the Guidelines be used?

Readers are encouraged to peruse the *Guidelines* in their entirety, to get a clear understanding of the health problems addressed and the range of strategies available to combat these epidemics. We encourage project sponsors and designers to incorporate as many relevant Active Design strategies as possible into each project, and to incorporate at least some strategies into every project. The more Active Design strategies are utilized, the more likely a project will increase daily physical activity—and the greater the project's potential impact on health.

Designers and project sponsors are encouraged to initiate discussions about Active Design issues early on, during a project's programming and scoping phase. Project partners should meet initially to set goals and to assess which potential Active Design strategies can be incorporated in the project. Publicizing and emphasizing the health benefits of innovative pilot projects can help to educate the public and to create demand for more Active Design projects.

COVER, NEW YORK CITY ACTIVE DESIGN GUIDELINES (2010). PHOTO: IWAN BAAN - CITY OF NEW YORK

CENTRAL PARK, WINTER: THE SKATING POND, 1862. LIBRARY OF CONGRESS, PRINTS AND PHOTOGRAPHS DIVISION

OPENING REMARKS

OPENING REMARKS *by Comm. Thomas Farley, MD, MPH*

Department of Health and Mental Hygiene

Physical activity is widely-known to be "good for you" but its value to health is still under-recognized. While its role in achieving and maintaining a healthy weight is often touted – and rightly so – regular physical activity has many other benefits. If you start exercising now, you're going to reduce your risk of chronic health problems such as diabetes, heart disease, and stroke. You'll lower your blood pressure. You'll reduce your risk of colon cancer, osteoporosis, and hip fracture, which is a major cause of morbidity and mortality in the elderly. Physical activity reduces your risk of depression and elevates your mood. It also can reduce cognitive decline that can occur with age and may help to prevent Alzheimer's disease.

While those of us in public health have long promoted exercise and fitness, only about 25% of people engage in regular, deliberate exercise. Incorporating physical activity into one's daily routine is an important strategy for achieving better health. The good news is that exercise need not involve joining a gym or running five miles a day. Simply walking or biking to work rather than riding the subway or bus—or getting off the bus at an earlier stop and walking the rest of the way—can yield health benefits. So can climbing a flight or two of stairs instead of taking the elevator. The success of these strategies, though, depends on living in a neighborhood and city that support physical activity.

During the last 60 years, we have engineered physical activity out of our daily lives. We have designed cities—buildings, streets, neighborhoods—that do not easily allow residents to be active. But if we could engineer physical activity out of our daily lives, we can engineer it back in. Doing so will require a concerted effort among health officials, architects and urban designers, like the collaboration we have at Fit City. We need to design buildings that encourage stair use by making staircases attractive and prominent. We need to design streets and public spaces that encourage walking, biking, and other forms of exercise. New York City's *Active Design Guidelines*, the first of their kind in the nation, give us the tools to create healthier environments and encourage healthier living.

Implementing the *Active Design Guidelines* will have other less obvious benefits. A number of strategies contained in the *Guidelines* can benefit the environment. If people use their own energy to move around, we will burn less fossil fuel. The social benefits, too, must be recognized. By creating attractive streetscapes, people will be more inclined to gather in public spaces, increasing social interaction.

Our health in an era of chronic diseases and injuries is influenced by our behavior: whether we smoke, how much physical activity we get, and what we eat and drink. These behaviors are, themselves, influenced by the world around us, including our physical environment. Creating opportunities for everyone to get more physical activity is an essential step in creating a healthier New York.

*(**TOP**) Craig Zimring, PhD, Georgia Institute of Technology; Gayle Nicoll, PhD, Univ. of Texas at San Antonio; Lynn Silver, MD, MPH, Dept. of Health and Mental Hygiene; Victoria Milne, MID, Dept. of Design & Construction; Karen Lee, MD, MHSc, Dept. of Health and Mental Hygiene; Rick Bell, FAIA, AIANY; Comm. David Burney, FAIA, Dept. of Design & Construction; Tony Schirripa, FAIA, AIANY*

*(**BOTTOM - FIRST ROW FROM LEFT**) Tony Schirripa, FAIA, AIANY; Comm. Adrian Benepe, Dept. of Parks & Recreation; Margaret Castillo, FAIA, AIANY; Craig Zimring, PhD, Georgia Institute of Technology; Comm. David Burney, FAIA, Dept. of Design & Construction, Comm. Thomas Farley, MD, MPH, Dept. of Health and Mental Hygiene; Comm. Janette Sadik-Khan, Dept. of Transportation; and Chair Amanda M. Burden, FAICP, Dept. of City Planning at the launch event*

OPENING REMARKS by Comm. David Burney, FAIA

Department of Design and Construction

We probably had enough commissioners and deputy commissioners and assistant commissioners involved in the creation of the Guidelines to start our own city. What a city that would be: smoke-free and trans-fat-free and low-calorie. And it would be universally designed. We would have parks everywhere. We would have complete streets. We would have a million trees. And we would have opportunities for physical activity through design everywhere in the urban realm, in buildings, and all around the city. It really would be a healthier and a happier city.

Thanks to the approach of the Bloomberg administration, many of the public challenges that face us as a city are more manageable than we may have thought. There is a definite sense among New Yorkers that government can do a lot more and that we do have a certain amount of influence to change things. The epidemic of obesity falls squarely into that category.

At the Department of Design and Construction, we produced a series of design guidelines on many aspects, from sustainable design to high performance, that are not mandatory parts of the building code but form part of the work and the resources that designers use.

We especially want to inform designers about strategies that encourage mobility, the least well-developed and least understood aspect of design. How do you remove obstacles to make it possible for people with health issues, whether they are seniors or diabetics, to exercise more? Sometimes you can use straightforward approaches to narrow street crossings, slow traffic, or increase opportunities for mobility within buildings but some strategies are slightly counterintuitive, such as putting benches along paths in parks.

Through the process of compiling the *Guidelines*, I have been very surprised to see just how many opportunities there really are for architects and designers to promote physical activity and well-being in the built environment. We hope that their adoption will have an impact on public policy, not just in the realm that the city controls, which are the streets and city buildings, but also in a broader context.

Launch of the Active Design Guidelines, Center for Architecture (January 2010); Emily Nemens

GreenBranches Learning Garden, Queens Library Whitestone Branch, Queens Horticultural Society of New York and Marpillero Pollak Architects; Linda Pollak

OPENING REMARKS by Comm. Janette Sadik-Khan

Department of Transportation

World-class cities understand that they have to design their streets differently if they are going to thrive in the 21st century. At the Department of Transportation, we are creating safer streets and more interesting streetscapes that will allow more New Yorkers to enjoy the streets on bike or on foot. Many of our initiatives are bold, but they are essential for the long-term health of the city.

To achieve better street quality, we are bringing new ideas from places like Copenhagen and tailoring them to meet the needs and the unique circumstances of our city. These designs have resulted in some pretty cool new bike lanes, which are making road conditions safer for people to get around town, whether riders are seven or seventy. I look forward to working with Commissioner Farley on ways to document the health benefits associated with our bike network in the years to come.

In New York, everyone is a pedestrian at some point. We are using innovative ideas developed at home to improve the quality and safety of the pedestrian experience. Our latest project builds on the success of Broadway Boulevard and Madison Square to create an incredible new boulevard with some terrific pedestrian spaces at Times Square and at Herald Square.

There is no monopoly on good ideas. The *Guidelines* contain ideas generated both here and adopted from elsewhere. In combination, these ideas will create a healthy, sustainable, and dynamic city.

OPENINGS REMARKS by Comm. Robert LiMandri

Department of Buildings

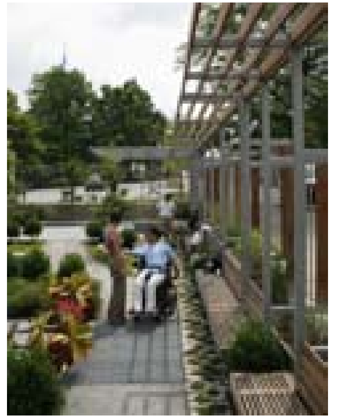
At the Department of Buildings, we have the ability to read the building code, interpret the code, and amend the code where we see fit. Already, we have made some changes to encourage physical activity like widening stairwells in new buildings and adjusting stair treads – the ratio of rise – to make it more comfortable to walk up the stairs.

We have used the International Building Code as a model from which to define a code tailored to New York City. We think that we have an urban code, which is much stricter in many aspects than the regular International Building Code, but it does not mean we have achieved a flawless or static set of building regulations. Every three years we have the chance to revise the building code to ensure wider implementation of the most successful methods.

Each of the strategies that emerge from the *Guidelines* is an opportunity to improve the way people move within the city. It is possible that some of the things that have been identified in the *Active Design Guidelines* will actually become the norm and could be incorporated into regulation in the future.

OPENING REMARKS by Comm. Matthew Sapolin

Mayor's Office for People with Disabilities



People with disabilities have a variety of functional levels. Many wish to engage Active Design, while others wish to participate more in the passive benefits of Active Design. Recently, my office consulted with a committee for people with disabilities created by the Parks Department about a particular route being planned to access a new bathroom. When given the option, the group preferred a circuitous route that would meander through a beautiful park space and would provide some exercise compared to the alternative: traveling on a direct switch-back ramp.

Artistic installations and programming installations along routes provide landmarks for people who might have developmental disabilities but who can travel via visual cues. They provide opportunities to engage other populations, including people who might not travel independently. We will all benefit if the appropriate rest stops, leaning posts, and programming opportunities are incorporated into longer walks.

We will soon release our third universal design publication, Inclusive Design Guidelines, New York City. Universal Design is a consideration of what the function of a particular venue or space is and the optimization of that use for all the potential visitors in that space. The process for creating the guidelines involved internal conversations, focus group input, and assembling other stakeholders. Active Design and accessible design meet each other to create inclusive environments for all.

KEYNOTE ADDRESSES

BIKE STATION IN MÜNSTER, GERMANY; PETER BERKELEY

JOHN PUCHER, Professor, Rutgers University

Excerpts from Keynote

Architects, urban designers, and city planners create the conditions that increase levels of active transport and physical activity. They can physically alter streetscapes to make them safer for cycling and for walking. They can build active living into daily routines so people improve their physical and mental health effortlessly.

First, we need to promote more walking and cycling for daily travel. This is a matter of social justice. We must provide walking and cycling facilities that are safe and convenient for all income levels, for women as well as men, for all age groups, and for people of different levels of physical abilities.

Less than 10 percent of the trips taken in the United States are on foot or bicycle. In countries like Switzerland, the Netherlands, and Spain, 30 to 40 percent of daily trips are taken by either walking or cycling. Europeans are getting tremendous value from active transportation and physical activity just by going to school, going to work, doing their shopping, and visiting friends.

Surprisingly, New York City has one of the lowest rates of cycling of any city or metropolitan area in the United States, despite its ideal conditions for cycling: flat terrain, decent climate, mixed development, and short distances between places. Cycling doubled in New York City since 2000, yet still less than one percent of trips are made by bike.

Unfortunately, there has been no increase at all in women's cycling. A survey from the Health Department finds that men are three times more likely than women to be frequent cyclists. More women cycle when you give them safe, convenient, and traffic-separated cycling facilities. In Central Park, 44 percent of cyclists are female as opposed to 25 percent in New York City as a whole. Other countries prove that it is possible to equalize the male-to-female biker ratio. Fifty-six percent of cyclists in the Netherlands are women, 55% in Sweden and Denmark, 50% in Finland, 48% in Germany. Many women are confident biking in European countries along an integrated system of comprehensive cycling facilities that are designed for convenience and safety.

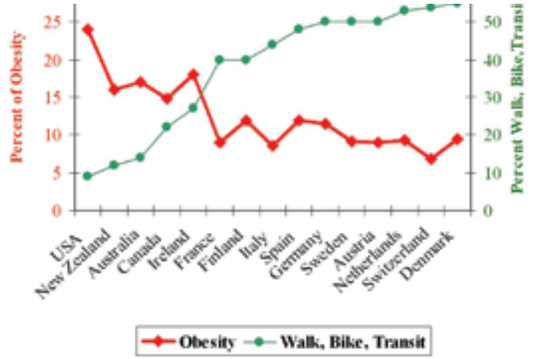
Seniors have health incentives to cycle, yet virtually no seniors in New York

SUMMER STREETS, PARK AVENUE (2008); NYC DEPARTMENT OF TRANSPORTATION; DANIEL KOKLA

ride bikes even occasionally. Twelve percent of all the trips by the German elderly are made by bike and that rate actually increases with age. One-fourth of the trips made by the Dutch elderly are by bike. We must provide facilities to make riders of all ages feel comfortable.

New infrastructure is necessary to make cycling safe and attractive to a wider audience. We need secure bike parking, stricter police enforcement of the existing bike lanes, bike racks on buses, and ample and secure sheltered bike parking at transit terminals. We need full-service bike stations. Commonly found by transit stations in Europe, they wash, rent, repair, and store bikes and provide touring information for visiting cyclists. And we need to limit motorists' speeds to 19 miles per hour in neighborhoods, a level that reduces pedestrian and cyclist fatalities by

Does Auto-Dependency Make Us Fat?



John Pucher

60 to 80 percent.

Traffic education is crucial to acclimate youth to walking and cycling and generally integrating active travel in their daily routines. Children who walk or cycle increase their physical activity levels and their own health, develop habits that promote independent mobility, and reduce the number of household vehicular trips.

Walking and cycling produce many environmental, social, and health benefits to individuals and to broad populations. All of these combined provide an important political rationale and generate public support for promoting safer walking and cycling conditions. The design of our policies and our facilities should satisfy as broad a range of people as possible: all age groups, women and men, people with different levels of physical abilities, different incomes, and from different racial and ethnic groups. We should be inclusive and make social justice one of the core principles of our transportation policies.

Bronx Library Center, Dattner Architects/Jim Goldberg - ESTO

GAYLE NICOLL, *Chair, Department of Architecture, University of Texas at San Antonio*

Excerpts from Keynote

The *Active Design Guidelines* were created through interagency collaboration. The Commissioners acted as agents of change in creating this public policy document. Next, with the *Guidelines* in distribution, design and health professionals are needed as the next generation of agents of change to implement the *Guidelines* strategies through their professional practices and through their educational preparation. They will choose the most applicable strategies to infuse active living into their designed projects and broadly into the lives of New Yorkers.

I recommend when designing environments that promote health we consider environmental change through both pull and push strategies. Pull strategies promote behavioral change through the use of either information, aesthetic or sensory appeal of the environment. Push strategies by contrast create behavioral change through mandates in environmental design or policy.

Push and pull strategies have proven successful in other health initiatives, for example eliminating indoor smoking. In the 1960s and 1970s, the thought that there would be a ban on smoking within buildings was viewed as a crazy idea; yet now, we accept and expect it. This change in public opinion began with the initiative of the U.S. Surgeon General to first place warning stickers on cigarettes. Later, anti-smoking campaigns aimed at dissuading people from smoking were common in public media. These were both pull strategies. These strategies were effective, slowly over time, in changing public attitudes. More recent and more dramatic, the implementation of a push strategy of legislating smoking bans in buildings has achieved significant reductions in our daily exposure to tobacco smoke.

In the *Active Design Guidelines*, we used mostly pull strategies to attract more people to the idea that we can design our city to have a variety of activity. The *Guidelines* do not prescribe rules or establish performance standards. Instead they provide environmental recommendations for promoting increased physical activity through best-practice-based design and evidence-based design strategies that architects and planners can choose from to best incorporate Active Design into their projects.

Evidence-based practice is the process of making design decisions based on the best information available from validated research studies. The evidence-based strategies presented in the *Active Design Guidelines* are strategies that have research supporting their efficacy. Best Practices are strategies that are not supported through research studies but use established precedents or existing practices. They are considered likely to be effective in achieving a desired outcome. The *Guidelines* employ a graphic system to inform design professionals about the relative strength of the evidence of each strategy to increase physical activity.

There are some very simple principles attached to most pull strategies. For example, the physical attributes of any type of environmental initiative exhibit six factors: convenience, comfort, accessibility, safety, legibility, and appeal. If we can provide all these principles to a particular feature, such as stairs or bike paths or walking paths, we incentivize people to voluntarily use them. If we cannot provide all of these principles, we must prioritize the most important ones. Aesthetics are an important element in Active Design but placement and visibility of features along paths of travel are essential. The appearance and comfort of stairs will attract more stair use but it matters little if you have an attractive stair that is inaccessible.

Environmental Factors Affecting Voluntary Physical Activity

Excerpt from conference presentation

One of the strongest areas of research has focused on the placement of point-of-decision signage prompts at elevators and escalators to promote stair use. We know that this simple, inexpensive strategy is effective in increasing physical activity through stair use in existing buildings.

The *Guidelines* also include some push strategies, such as skip-stop elevators. While allowing people with disabilities elevator access to every floor, Morphosis' Caltrans headquarters building in Los Angeles operates elevators that stop at every third floor for able-bodied people; you have to go one or two flights up or down to reach an alternative floor. A study of this building indicated that skip-stop elevator/stair design resulted in 33 times more stair use by skip-stop users than those riding in traditional elevators. Seventy-two percent of the Cal Trans employees reported daily use of the stairs at an average of six flights a day in the 13-story building.

We have evidence that providing access to recreational facilities decreases obesity. In some respects, this is a pull strategy. Designers and developers create these spaces to attract people to them. However the failure to provide facilities that promote physical activity can also be viewed as a push strategy. When we fail to provide spaces for people to be active, we are basically mandating that people will not have access to physical activity. This especially affects those who cannot afford access to private facilities, thus driving up their risk of becoming overweight.

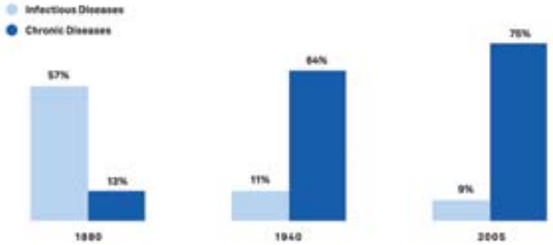
The *Active Design Guidelines* also have synergies with other initiatives, including environmental sustainability and Universal Design. LEED has already recognized existing points for bike storage and showers, public transportation, and connectivity and walkability, and recently added the opportunity to earn an innovation credit for incorporating Active Design. In 2009, the New York City Department of Health and Mental Hygiene received this innovation credit for the Riverside Health Center renovation that included physical activity-promoting design in elevator/stair design and in operations, and increased access to recreational facilities for staff. I hope that more architects will want to utilize the strategies in this innovation credit to both promote physical activity in building occupants and achieve credit toward LEED certification.

Taking a wider stance, the creation of a better environment where everybody has the opportunity to be physically active is actually a means of promoting a healthier New York.

CHAPTER 1:
Environmental Design and Health: Past and Present

In the 19th and early 20th centuries architects and urban reformers in New York City and elsewhere helped defeat infectious diseases like cholera and tuberculosis by improving buildings, streets, neighborhoods, clean water systems, and parks. In the 21st century, designers can again play a crucial role in combating the biggest public health epidemics of our time: obesity and related chronic diseases such as diabetes, heart disease, and some cancers.

Changing Percentage of Deaths in NYC Attributed to Infectious Versus Chronic Diseases, 1880 to 2005



The City of New York Summary of Vital Statistics (2005)

GUIDING PRINCIPLES *Excerpts from Fit City 4*

"Today, physical inactivity and unhealthy diet are second only to tobacco as the main causes of premature death in the United States. A growing body of research suggests that evidence-based architectural and urban design strategies can increase regular physical activity and healthy eating."
– Karen Lee, MD, MHSc, FRCPC, Director, Built Environment, NYC Department of Health and Mental Hygiene

"New York City is following national health trends. The rate of obesity has risen to 26 percent of adults and diabetes rates increased from 3.7 percent of adults in 1995 to nine percent in 2007. Diabetes is a devastating epidemic that starts with our daycare-age children, only half of whom are currently at a normal weight.

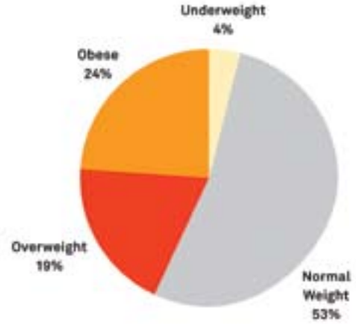
Aspects of our city's design have a profound influence on obesity and other chronic diseases. At the Department of Health and Mental Hygiene, we have found an inverse ecological association between active transportation and obesity. Part of the public health challenge of building a healthier city is to extend Active Design strategies to neighborhoods with populations at high risk for obesity and diabetes."
– Lynn Silver, MD, MPH, Assistant Commissioner, NYC Department of Health and Mental Hygiene

"In addition to the health crisis, we have two demographic trends that are really troubling. Our incredibly aging population is not going to be able to access their cars as easily as they were in the past and, similarly, we have a crisis in affordable housing. All of the agencies came together to put this document in place and detail the initiatives that we need for all people to get there from here, literally, and to improve the quality of life of all residents."
– Comm. Janet Sadik-Khan

Diabetes and Obesity Rates in NYC by Neighborhood

NYC Department of Health and Mental Hygiene, Community Health Survey
NYC Department of Health and Mental Hygiene and Pentagram

Rates of Childhood Overweight & Obesity, NYC



The City of New York Summary of Vital Signs (2003)
NYC Department of Health and Mental Hygiene and Pentagram

CHAPTER 2:
Urban Design: Creating an Active City

The *Guidelines* present strategies for designing neighborhoods, streets, and outdoor spaces that encourage active transportation and recreation, including walking and bicycling. Key recommended measures include:

- **Design accessible, pedestrian-friendly streets with high connectivity, traffic calming features, landscaping, lighting, benches, and water fountains;**
- **Facilitate bicycling for recreation and transportation by developing continuous bicycle networks and incorporating infrastructure like safe indoor and outdoor bicycle parking;**
- **Develop and maintain mixed land use in city neighborhoods;**
- **Improve access to transit and transit facilities;**
- **Improve access to plazas, parks, open spaces, and recreational facilities, and design these spaces to maximize their active use where appropriate;**
- **Improve access to full-service grocery stores and fresh produce.**

Madison Square/ Flatiron Plaza, NYC Department of Transportation

GUIDING PRINCIPLES *Excerpts from Fit City 4*

"At the Department of Transportation, we are building transit-oriented development into the design of the city. The evolution of the city came around its transit system. We are going back to the future one hundred years later and looking at what we can do to create more livable, walkable cities."
– Comm. Janette Sadik-Khan

"New York City is ideal for bike-share. The city is essentially flat and most trips are less than three miles. First, we have been working to build out the bike network. More needs to be done to ensure the safety of pedestrians and cyclists to acclimate New Yorkers to a cycling culture that will enable a bike-share program."
– Comm. Janette Sadik-Khan

"Spaces and venues should be usable and animated with programmed activities that invite all visitors to walk or move about. Benches, posts, railings, and artwork create environments that universally entice people to engage in physical activity when traveling to or through a place."
– Comm. Matthew Sapolin

"Active Design comes down to the basic principle of planning for pedestrians, transit and bikes first, and then accommodating cars second. Cars, after all, have the most mobility built into them. In all we do, the continuity of the pedestrian experience is key to the walkability of the street."
– Alex Washburn, AIA, Chief Urban Designer, Dept. of City Planning

"Fairly simple changes to streets and public spaces have shown that a more pedestrian- and bicycle-friendly city can achieve many goals at once - mobility, health, environmental sustainability and economic efficiency.
– Wendy Feuer, Assistant Commissioner, Urban Design and Art, Dept. of Transportation

Green Light for Midtown, Herald Square/ 34th Street Partnership

CHAPTER 3:
Building Design: Creating Opportunities for Daily Physical Activity

Opportunities for incorporating regular physical activity into daily life can be found not only outdoors but inside buildings as well. Architects can help building occupants incorporate physical activity into their daily routines through the following measures:

- **Increase stair use among the able-bodied by providing a conveniently located stair for everyday use, posting motivational signage at elevators and escalators to encourage stair use, and designing visible, appealing and comfortable stairs;**
- **Locate building functions to encourage brief bouts of walking to shared spaces such as mail and lunch rooms;**
- **Provide appealing, supportive walking routes within buildings;**
- **Provide facilities that support exercise such as centrally visible physical activity spaces, showers, locker rooms, secure bicycle storage, and drinking fountains;**
- **Design building exteriors and massing that contribute to a pedestrian-friendly urban environment and that include maximum variety and transparency, multiple entries, stoops, and canopies.**

Bicycle Storage Room, Solaire, Cesar Pelli & Associates; NYC Department of City Planning

GUIDING PRINCIPLES *Excerpts from Fit City 4*

"Sometimes, in order for public policy to push a group of people forward, we need to be proactive. Prescriptive guidelines and financial incentives are important elements that can result in policy changes. That is exactly why we are enabling bicycle parking in buildings; commuters are disinclined to ride a bike to work if they do not have anywhere to store them when they arrive."
– Comm. Robert LiMandri

"The actual steps to promote activity in the built environment are simple– prominent stairways, inviting corridors, engaging views or visuals, etc.– they would all be considered good design. But we're showing in the *Guidelines* that taken together these small moves will have an important impact on the health of a building's occupants."
– Victoria Milne, Director of Creative Services, Dept. of Design and Construction

"Often times, the built-environment contributes to decisions we make in our daily routines. The decision to bike to work is made easier if bicycle storage and shower rooms are available on the premises. Also, many stairways are used as exit stairs only. There is an opportunity to promote physical activity by designing stairways that are visually welcoming and proportionally comfortable while at the same time, meeting fire and life safety requirements in the code."
– Keith Wen, RA, Director, Code Development, Dept. of Buildings

Lerner Hall, Columbia University; Lisa Gould

CHAPTER 4:
Synergies with Sustainable and Universal Design

Active Design promises benefits not only for public health but also for the environment and for advancing universal design. Design strategies that increase physical activity and improve health—for example, measures that promote walking over driving, stair over elevator and escalator use for the able-bodied, and active recreation over television-watching—also tend to reduce energy consumption and greenhouse gas emissions. In addition, Active Design can assist not only people able to climb stairs daily, but users of all mobilities, ages, and backgrounds. A diverse, active, healthy population and a sustainable planet are synergistic.

The fourth chapter describes the importance of value creation and cost-effectiveness, as well as points of synergy between Active Design strategies and a number of local, national, and international initiatives, including the Leadership in Energy and Environmental Design (LEED) green building rating system, PlaNYC—New York City's strategic plan for sustainability, the New York City Department of Health and Mental Hygiene's Take Care New York program, and efforts by the City's Departments of Transportation and City Planning to expand New York's bicycling infrastructure. The LEED Innovation Credit "Design for Health through Increased Physical Activity" that includes stair, elevator, and recreational space strategies is also presented.

GUIDING PRINCIPLES *Excerpts from Fit City 4*

"Very little land is available for new buildings in New York. We should pay attention to the Mayor's plan for retrofitting existing buildings. PlaNYC predicts that eighty percent of the buildings that exist today are still going to be around in 2030. Existing structures are the ones that we really have to deal with, in order to make an impact on CO^2 emissions. These buildings – the places where we live, work and spend most of our time — are where small design interventions can have a large impact on our daily amount of physical activity."
– Nancy Biberman, President, WHEDCo

"A universal addition to a ramp, for example, could include a railing for a child. A more inventive solution might have also include a Star Trek-like proximity finder for people who are blind that would beep to tell me when I have reached the top of a ramp and that Starbucks was on the right. The opportunities for technology, marketing, and sponsorship for these kinds of ideas are enormous in design, and only creativity will either get us there or hold us back."
– Comm. Matthew Sapolin

"To build Active Design into the DNA of the city requires an exponential kind of penetration into the community and the city as a whole. People who believe in the concept need to talk to their clients, neighbors, and others. You have to let people know why a bike lane can be better for the collective street activity than a parking space."
– Alex Washburn

Right: Posted stair prompts near elevators and escalators encourage stair use, Riverside Health Center in Manhattan; Ashley Perry, NYC Department of Health and Mental Hygiene

Left: Pentagram

Bronx Museum of the Arts; Arquitectonica; Norman McGrath

ACTIVE DESIGN IN ACTION

ACTIVE DESIGN CHARRETTE

Once the *Guidelines* were in preliminary draft form, the creators asked how to evaluate their applicability to real world situations—what works, what needs work?

In January 2009, in conjunction with the *Active Design Guidelines* consortium of NYC city agencies, the AIA New York Chapter hosted a "charrette," an intensive, one-day design workshop, to test the *Guidelines* against actual building and public realm designs—both for proposed new construction, in which new approaches could be inserted into as yet unbuilt plans, and for renovations of existing buildings and streetscapes, an even more difficult retrofit.

Participants included design professionals—architects, planners, urban designers and landscape architects—as well as representatives of the various cooperating agencies (NYC Departments of Health and Mental Hygiene, Design and Construction, City Planning, Transportation, and the Mayor's Office of Management and Budget).

These planning and design professionals were recruited by Ernest Hutton, co-chair of the AIANY Planning & Urban Design Committee, who was hired by the client to organize and facilitate the event. An initial planning session led to suggestions for building and public realm examples, both existing and still on the boards Relevant development and design teams associated with the projects were contacted to solicit usable plans and documentation and to invite participation in the workshop. Using the volunteer committee structure of AIANY and of associated organizations such as the American Planning Association and the American Society of Landscape Architects, other architectural, planning, urban design and landscape professionals were recruited to lend their expertise.

The charrette took place at the New York Center for Architecture with sponsorship from the Milbank Memorial Fund. The teams were briefed with a description of the *Guidelines* that focused on specific elements whose use can encourage exercise and a healthy lifestyle, such as stair and elevator design, bicycle storage within buildings, exercise facilities, open space, bike lanes and streetscape design to promote pedestrian use and active transportation modes.

The participants then broke into small groups to explore ways to integrate such features into actual building and site design examples, coming together at intervals to discuss what works and what needs work. Examples studied included existing and proposed low-/ mid-rise housing, high-rise housing, high-rise commercial buildings, health facilities and hospitals, cultural institutions and libraries, and public realm design of streets, parks and plazas.

Careful notes were taken by the *Guidelines'* authors in order to refine the standards based on this real-world evaluation. At the end of the day the group as a whole evaluated the exercise and the potential for implementation of the *Guidelines* through education, example, suggestion and regulation.

–Ernie Hutton, FAICP, Assoc. AIA, AIANY

***"The Active Design Charrette was extremely helpful for understanding Active Design roles, principles, and strategies. Five groups each worked with a project in the morning, and a project in the afternoon, and after each of these sessions presented findings to the other four groups about how the project worked or could work in the context of the* Guidelines.** ***I believe that this kind of workshop format is a way to engage people in Active Design: to enable them to establish a meaningful connection between their own practices and the case studies found in the* Guidelines."** *– Linda Pollak, AIA, ASLA, Principal, Marpillero Pollak Architects*

Working group at Active Design Charrette, Center for Architecture (2009); NYC Department of Health and Mental Hygiene

NANCY BIBERMAN, *President, Women's Housing and Economic Development Corporation (WHEDCo)*

When I first arrived in the Bronx in 1989 (and before WHEDCo was founded) I directed the development of 23 abandoned buildings and created six vest-pocket parks. This project was one of over a half dozen of comparable size, a key initiative of the city to restore and reclaim vast swaths of abandoned buildings and vacant land.

On the block where WHEDCo's newest 128-unit green building, Intervale Green, opened in early 2009, economic conditions have caused many retail stores to close. There is an increase in unreported crime – violent crimes, drug-related crimes, and gang-related crimes that are basically drug-related crimes – at a higher rate than we have seen in years past. Empty storefronts facilitate illegal behavior under the elevated train tracks and in other unmonitored spaces. These conditions prevent people from walking outside as much as they would like and cause parents to keep children off of the streets. Insecurity is truly a deterrent to active living.

What can a designer do? At Intervale Green, we included footprints in the circular inner courtyard and posted information that tells people how many loops around the landscaped circle it will take to walk a mile, how many calories they burn each revolution, and how much energy they expend. Since we had already built the space, the addition of this information added no significant expense to the development.

We tried to do more than promote stair use in this building. We were deliberate in our "greening" efforts in multiple ways: through over a half-acre of landscaped green roofs and courtyards, a community sculpture garden for neighborhood residents, and public arts fabricated through recycled materials.

In 1996, WHEDCo and architects Becker + Becker rehabilitated the abandoned Urban Horizons/Morrisania hospital, which closed during the 1970's fiscal crisis. Today, we are performing a cellar-to-roof energy retrofit of this massive structure. Edelman Sultan Knox & Wood Architects are incorporating some of the Active Design strategies contained in the *Guidelines*. The stairs in the building are fortunately well-located, designed to be wide for hospital use, and are immediately visible from the front door.

Courtwalkat Intervale Green, Edelman Sultan Knox Wood Architects; WHEDCo

Even though the stairs are prominent, we posted bilingual stair prompts at elevator call areas and outside the stairs on each floor. The Health Department sent representatives to count stair use in the building before and after the prompts went up and found a significant and sustained increase in stair use due to signage.

Stairwells are the bane of property management in affordable housing. They are typically places where kids loiter and where drug use takes place. We can reverse a common approach to building security that otherwise discourages the use of stairwells by designing respectable spaces with light, music, and beautiful things on the walls.

Home and community design are important but schools are the most relevant place for nurturing physical exercise routines for children. As a result of the No Child Left Behind Law, many school administrators have removed virtually all physical activity from the program of the school day. Studies show that strenuous physical activity can improve academic performance by bringing a greater flow of oxygen to the brain. The test prep and drilling being done is often counter-productive, as young children spend way too much time at desks, without corresponding evidence that seated instruction improves test scores. What we do know, however, is that nearly half of young people throughout the Bronx are overweight and even obese.

The former Borough President of the Bronx Adolfo Carrión studied infrastructure in Bronx schools before leaving for a federal post as the Director of the White House Office of Urban Affairs. He found that 23 percent of Bronx schools have no indoor gyms; 22 percent have no outdoor facilities; 25 percent have no certified physical education instructors; and 90 percent of elementary schools and 50 percent of secondary schools failed to provide sufficient hours to meet minimum New York state-mandated physical education requirements. We have to change what is going on inside of these buildings. As found in the *Active Design Guidelines,* the School Construction Authority is now creating gymatoriums (interchangeable spaces that can function as a gym as well as an auditorium), in place of traditional auditoriums to create an extra space for physical activity. That is a good start, but we still have lots left to do.

BETTY CHEN, *AIA,* ***Vice President for Planning, Design and Preservation, Governors Island Preservation & Education Corporation***

How do we promote physical activity in the planning of a large-scale mixed-use project? What are we thinking about when we are designing the parks and public spaces on Governors Island? How are the *Active Design Guidelines* relevant to that work?

When Governors Island was turned over to New York City and State, it was an abandoned ghost town. It had historic and non-historic buildings from different eras and contained acres of available land that inspired many proposals for the future use of the island.

At GIPEC, we follow four key strategies to revitalize the island:

1. ***Expand public access and signature early uses***
2. ***Public investment in stabilization and infrastructure***
3. ***Multi-phase, mixed use development strategy***
4. ***Early creation of new world-class park and public space***

We hired a team led by the landscape architecture firm West 8, and they are working in collaboration with Rogers Marvel Architects; Diller Scofidio + Renfro; Mathews Nielsen; and Arup. This team is designing a future park for us on an 87-acre site. The program really consists of biking, walking, and a mix of other types of active recreation.

The island is a mile long, and its car-free environment invites exploration by bicycle. In fact, one out of every four visitors to Governors Island rides a bicycle. GIPEC offers a variety of free and fee-based cycling options for adults and children, such as individual bicycles, tandem bicycles, and surreys, which make riding around the island fun and accessible.

We have been testing out various aspects of the bicycle program to make cycling attractive and hassle-free. First, the ferry to the Island has a 125-space bike rack, possibly the longest in New York. We also have dedicated a cyclist-only section at the ferry queue, which simplifies the process of bringing a bicycle to the island. For those who do not own a bike, it takes only a few minutes to get from arriving at the ferry landing to the seat of a free bicycle. We have also assessed the design of the bike paths and the different types of striping and markings that are effective and visible. Finally,

Governors Island, Ellen Cavanagh, GIPEC

the wide pathways that we are planning will enable people to ride side-by-side, an experience rarely available in the New York cycling network.

Our objective is to create a democratic playground with places of all kinds for adults and children to play. We now provide spaces for organized activities: league sports, kayaking lessons, and ball sports; but also informal activities and pick-up sports. We are working with architects and landscape architects to design spaces that invite and facilitate these different types of activities. The activities that we have on the island today inform how we will move forward to create an appealing park that invites visitors to be active.

The *Active Design Guidelines* include great common sense suggestions for designers to enhance the pedestrian experience. Throughout the island, we are offering benches for physical respite, objects of visual interest like public art, and amenities such as restrooms and drinking fountains, and wayfinding. In 2009 we installed finger signs with time estimates, which provide a marked and measured path for pedestrians. Visitors can now calculate the distance from their location to other destinations.

The *Guidelines* urge designers to create or preserve natural terrain for outdoor play areas. At Governors Island, the design team is going to take a place that is quite flat and barren and transform it to create an undulating landscape. The design team envisions a new topography at the southern portion of the island that will give people a dynamic environment to explore.

There are a lot of quantitative suggestions contained in the *Guidelines,* but the qualitative experiences are also real opportunities for architects and landscape architects. For these professionals, many of the *Active Design Guidelines* are feasible to incorporate in a project like Governors Island. They help designers to highlight the fun and delight in physical activity.

KIRSTEN SIBILIA, *Assoc. AIA,* ***Chief Marketing Officer Dattner Architects***

Designers need to understand that Active Design is a new concept for many of our colleagues and most of our clients. By Rogers' innovation adoption model, we must identify potential early adopters who can support the concept and help bring Active Design into the consciousness of the mainstream. The rise of Sustainability in the recent past reflects this model, and some of the lessons learned from that process are applicable to Active Design.

First, we must clarify our own understanding of Active Design concepts and frame the value this new movement has for our clients and our projects. As with the gradual acceptance of Sustainability, the story that we tell about our projects will become richer as our clients begin to understand Active Design. With the support of the *Guidelines,* designers should engage clients in a dialogue about the tenets, using familiar elements to make a meaningful connection. Synergies with Sustainability, Universal Design, and carbon reduction benchmarks such as Architecture 2030 and Energy Star can help to articulate relevance and provide statistics that demonstrate how these principles can be incorporated into a variety of projects.

For example, Renzo Piano Building Workshop and FXFOWLE Architects emphasized the benefits that Active Design brings to the New York Times Building and to the occupants during the design process and afterwards. The project was marketed as exemplary for individual occupant as for the health of the organization. The New York Times seized upon an opportunity to do more than build new headquarters – they sought to redesign how their workplace operates and how they communicate interdepartmentally. The architecture encourages an active community within the building and provides health benefits to individuals. The visual continuity between spaces helps to promote the use of the stairs and interpersonal interaction between colleagues located on nearby floors.

Tracking results demonstrates the efficacy of Active Design strategies in existing projects. At PS/IS 276 at Battery Park City, Dattner Architects designed a sustainable school using the New York City Green School Guidelines. A customized signage solution will educate students on the innovations within the building and encourage movement throughout the vertical campus. Visible tracking mechanisms will show students and teachers the building's energy usage, the amount of energy generated from the photovoltaics, and how much rainwater has been harvested by the stormwater capture system. This transparency will help all students understand why Sustainability and Active Design are important in their school building and community and to see how their building and their actions positively affect the environment and their own health.

Tangible results are what our clients are really looking for when they ask whether it makes sense to design a green project or a project that incorporates Active Design. As designers, we know that it is good design; we know that it is the right thing to do, but we need the metrics to prove necessity to our clients.

Active Design will require more than traditional marketing for wide-scale adoption. We will need to effectively communicate the value of its incorporation in our projects to our clients. As we promote the concept by providing examples and testimonials, the momentum will grow, and more and more designers and clients will feel proud to be a part of this important movement.

LEED Credit for Bike Storage, Empire State Building, Joyce Lee

***ANDREW DENT,** Vice President, Library and Materials Research, Material ConneXion*

At a Sustainability conference I attended in Monterey, California in 2009 the Conference Center had a 30-foot-wide inviting stairwell and a tiny escalator on the right. I noticed that nearly all of the people used the escalator to access the second floor rather than the stairs. You can have open and inviting design and people who are committed to the concept of Sustainability and yet most will still take the easy route. Signage that reminds you of the health benefits of stair-climbing is often additionally necessary to invite people to go against their natural instinct of cramming on a narrow escalator in place of traveling on a vast staircase.

Innovative materials can be effective tools in promoting more active living, openness in stairways, and ways to feature signage. One example is glazing. By selecting glazing that contains lights within it, you can make a space seem more open.

Designers can use simple strategies to increase the light that reaches otherwise dark spaces. They can set text and maps within paving stones that are not just retro-reflected, not just bright, but also photoluminescent. Thus, no matter what time of the day or night, information is easily accessible. The messages become durable because they are embedded into the material of the stone and will last through the life of the paving. Light pipes embedded within cement also allow you to create flagstones, walkways, and even areas that are normally blocked off using impervious, opaque concrete.

Modern lighting based upon LED technology requires such low power that small integral solar panels may be used to generate enough energy to power them all night. Materials that use photoluminescence or slip-resistant, solar-panel-lit floor lighting are appropriate and easy to install. At Material ConneXion, we have sourced materials and products that enable lighting along walkways to be available continuously with no external power required. Light and visibility create safe and inviting conditions for people to use walkways and stairwells that would otherwise be spooky and treacherous.

Finally, some concrete paving is actually Teflon-impregnated as a way of increasing the stain-resistance of the surface. Maintenance of this pavement is simple since the surface is both anti-graffiti and easy to wipe clean of debris and ice.

When sourcing materials for your design, keep it very simple, keep it open, and keep it well-signed.

Left: Fire-protected glazing of stairwell, Memorial Sloane-Kettering Cancer Center, SOM in collaboration with ZGF Architects; David Sundberg / ESTO
Embedded Paving, Reflex, Ceda Stia; Material ConneXion

CASE STUDY: 41 COOPER SQUARE
Jean Oei, Architect, Morphosis

Cardiovascular fitness is no longer an inadvertent byproduct of spatial organization; spaces activate people; and movement animates space. At Morphosis, we strive to create connective spaces that engage movement and flows, to foster social interaction, health and wellbeing. Connectivity contributes to generating urban density at a range of scales, shaping the life of the city and its inhabitants.

PROGRAM

The design of 41 Cooper Square was driven by two primary factors—zoning and program—as well as Cooper Union's aspiration to create an iconic and innovative building. A zoning study stipulated a maximum envelope of 135-feet ht., with a total of 175,000 gross square feet. The program called for the consolidation of the school's three departments — art, architecture and engineering — from three separate buildings to two, which required a reduction of approximately 40,000 net square feet. Our challenge was to maintain the integrity of the institution as a renowned intellectual and cultural center, and reduce its footprint.

The new building comprises 40% engineering labs, as well as classrooms and art studios, offices and administration spaces, an exhibition gallery, an auditorium, a lounge and a multi-purpose space. Due to space limitations, we prioritized flexibility through a uniform grid system of modules. Each module is designed with a standard, efficient layout to interchangeably accommodate art studios, classrooms, and engineering labs, as dictated by the changing space needs of the institution.

Left: Atrium, 41 Cooper Square, Morphosis Architects with Gruzen Samton; Iwan Baan
Foyer, Manhattan to left; Stair to lower gallery and auditorium to right

ACTIVE OPTIONS AT CENTRAL POINTS-OF-DECISION

Upon entering the main lobby, a sky-lit atrium and grand stair immediately beckons the visitor. The 20-foot wide stair ascends through the atrium, which rises the full height of the building. Enveloped by an undulating lattice, this "vertical piazza"—the central space for informal social, intellectual and creative exchange—forms the heart of the new academic building. The central stairs and atrium were conceived as a vehicle to foster collaboration and cross-disciplinary dialogue, in a direct response to the institution's desire to interconnect students and faculty from its three schools.

ENCOURAGING FITNESS THROUGH CIRCULATION

The grand stairs are coupled with a skip-stop circulation strategy, to encourage increased physical activity and impromptu meeting opportunities. In the skip-stop system, elevators stop on the fifth and eighth floors; stairs traverse the atrium leading up and down a level from the fifth and eighth floor sky lobbies. The ADA-service elevator and the skip-stop elevators are centrally located; operating in close proximity, the elevators further democratize the social environment while enhancing comfort and wellbeing.

CONNECTIVITY TO EXTERIOR CONDITIONS AND ACTIVITY

In the spirit of the institution's dedication to free, open and accessible education, the building is symbolically open to the city. The sky-lit atrium brings light through the entire building, even into the lower level. The iconic, curving profile of the central atrium registers on the west façade, both projecting internal activity out to the city, and inviting the public to engage in the creative and social heart of the building. Visual transparencies and accessible public spaces connect the institution to the physical, social and cultural fabric of its urban context.

CASE STUDY: THE HIGH LINE

Charles McKinney, *Assoc. AIA ASLA,* ***Principal Urban Designer, Planning, NYC Department of Parks and Recreation***

The High Line is the tremendous project of Field Operations and Diller Scofidio + Renfro, initiated by the founders of Friends of the High Line Robert Hammond and Joshua David. The impetus for this imaginative reuse did not originate from inside the government, but it was supported by our smart city government that pays attention to good ideas that come from elsewhere.

The High Line was formerly an elevated railroad that transported paper, meat and other commodities into New York City from upstate and from the barges coming across the Hudson from New Jersey. It escaped demolition for years after the freight service was decommissioned. The structure runs from 30th Street to the Meatpacking District without crossing a crosswalk or competing with a car. It spans one and a half miles and contains 6.7 acres of land.

CAPTIVATING DESIGN

The current design of the park on the High Line is an abstraction of the abandoned rail and wildflowers growing up through the ballast. The concrete pavers evoke the character of the ruin by dissolving into wisps and drifts of grasses and perennials.

The uniqueness of the elevated rail's height and location create unusual viewpoints of the city. Common, controversial, and unapologetic architecture are all in close view at different points along the High Line, providing a safe, quiet and open space to walk.

TRANSITIONS

The Designers called the main access points "Slow Stairs"- "slow" in that elongated

Top Right: Plantings and Paths on Stage I of High Line; NYC Department of Parks & Recreation. Bottom Right: Waterfountain, High Line; NYC Department of City Planning

Left: Slow stairs, High Line; Field Operations, Diller Scofidio + Renfro; Irene Cheng

landings provide an opportunity to pay attention to the industrial structure as visitors make that transition from the sidewalk to the elevated park. The flights are wide enough to allow two people abreast. They are airy. They are safe and highly visible. They are stretched out so that you enjoy them and then emerge into the sunlight. There are 15 staircases in all spaced every two blocks; two of them are the slow stairs.

VARIED PROGRAMMING

The High Line is a rich collection of experiences that encourage a prolonged stay. It has water fountains (ones we newly designed) and bathrooms, and benches for resting or doing sit-ups or some other more imaginative things. The sun deck water feature between 14th Street and 15th Street is a gathering place with food and drink.

This park is an exercise in adaptive reuse as well as an overactive imagination, urged on by David and Josh, who never blanched at every fundraising opportunity. Neither did the citizens of New York, who supported this remarkable opportunity to walk.

RESOURCES

New York City *Active Design Guidelines:* Promoting Physical Activity Through Design.
Available at: www.nyc.gov/adg

Take Care New York Policy Brief: A Policy for a Healthier New York City. *Active Design Guidelines:* Promoting Physical Activity Through Design.
Available at: http://www.nyc.gov/html/doh/downloads/pdf/tcny/tcny-active-design.pdf

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Active Living Research
http://www.activelivingresearch.org/alr/

Department of Health and Mental Hygiene
http://www.nyc.gov/health

Department of Design and Construction
http://www.nyc.gov/ddc

Department of Transportation
http://www.nyc.gov/dot

Department of City Planning
http://www.nyc.gov/dcp/

Department of Buildings
http://www.nyc.gov/buildings

Department of Parks and Recreation
http://www.nycgovparks.org/

Mayor's Office for People with Disabilities
http://www.nyc.gov/mopd

Office of Management and Budget
http://www.nyc.gov/omb

PlaNYC 2030
http://www.nyc.gov/planyc

Fit City 1 Report
http://www.aiany.org/fitcity1

Fit City 2 Report
http://www.aiany.org/fitcity2

Fit City 3 Report
http://www.aiany.org/fitcity3

Urban Movement Design
http://www.urbanmovementdesign.com/

U.S. Centers for Disease Control and Prevention (CDC) Guide to Community Preventive Services, Recommendations for Physical Activity
http://www.thecommunityguide.org/pa

U.S. Centers for Disease Control and Prevention (CDC) StairWELL to Better Health
http://www.cdc.gov/nccdphp/dnpa/hwi/toolkits/stairwell/index.htm

Dattner Architects
http://www.dattner.com

Governors Island Preservation and Education Corporation
http://www.govisland.com

Marpillero Pollak Architects
http://www.mparchitectsnyc.com

Material ConneXion
http://www.materialconnexion.com

Mophosis Architects
http://www.morphosis.com

Women's Housing and Economic Development Corporation
http://www.whedco.org

CREDITS

Fit City Report prepared by: American Institute of Architects, New York Chapter
Sara Romanoski, Partnership Programs Manager
Rick Bell, FAIA, Executive Director

Acknowledgements:
NYC Department of Health and Mental Hygiene
Thomas Farley, MD, MPH, Commissioner
Andrew Goodman, MD, MPH, Deputy Commissioner, Division of Health Promotion and Disease Prevention (HPDP)
Lynn Silver, MD, MPH, FAAP, Assistant Commissioner, Bureau of Chronic Disease Prevention and Control, HPDP
Karen K. Lee, MD, MHSc, FRCPC, Director, Built Environment, Bureau of Chronic Disease Prevention and Control, HPDP
Victoria Grimshaw, MPH, Policy Analyst, Built Environment, Bureau of Chronic Disease Prevention and Control, HPDP
Sarah Wolf, MPH, RD, Coordinator, Built Environment, Bureau of Chronic Disease Prevention and Control, HPDP

2009 Conference Speakers:
Rick Bell, FAIA, Executive Director, AIA NY Chapter
Nancy Biberman, President, WHEDCo
David J. Burney, FAIA, Commissioner, NYC Department of Design and Construction
Betty Chen, AIA, Vice President for Planning, Design and Preservation, Governors Island Preservation and Education Corporation
Andrew Dent, Vice President, Library and Materials Research, Material ConneXion
Thomas Farley, MD, MPH, Commissioner, NYC Department of Health and Mental Hygiene
Wendy Feuer, Assistant Commissioner, Urban Design & Art, NYC Department of Transportation
Laurie Kerr, Senior Policy Advisor, NYC Mayor's Office of Long-Term Planning and Sustainability
Karen K. Lee, MD, MHSc, FRCPC, Director, Built Environment, Bureau of Chronic Disease Prevention and Control
Robert LiMandri, Commissioner, NYC Department of Buildings
Charles McKinney, Assoc. AIA, ASLA, Principal Urban Designer, Planning, NYC Department of Parks and Recreation
Victoria Milne, MID, Director of Creative Services, NYC Department of Design and Construction
Gayle Nicoll, Chair, Department of Architecture, University of Texas at San Antonio
Sherida Paulsen, FAIA, President, AIA NY Chapter
Linda Pollak, AIA, Partner, Marpillero Pollak Architects
Jean Oei, Architect, Morphosis
John Pucher, Professor, Rutgers University
Janette Sadik-Khan, Commissioner, NYC Department of Transportation
Matthew Sapolin, Commissioner, NYC Mayor's Office of People with Disabilities
Kirsten Sibilia, Assoc. AIA, Chief Marketing Officer, Dattner Architects
Lynn Silver, MD, MPH, Assistant Commissioner, Bureau of Chronic Disease Prevention and Control, NYC Department of Health and Mental Hygiene
Alexandros E. Washburn, AIA, Chief Urban Designer, NYC Department of City Planning
Keith Wen, Director, Code Development and Interpretation, NYC Department of Buildings