



Mayor Michael A. Nutter
CITY OF PHILADELPHIA

ENERGY ENVIRONMENT EQUITY ECONOMY ENGAGEMENT



Public policies that favored suburban sprawl over urban density helped pull people and jobs away from Philadelphia. In 1950, Philadelphia had a population of more than 2 million people and had built an urban infrastructure capable of supporting 2.5 million. But when the century ended, the city held less than 1.5 million residents.

Yet cities like Philadelphia remain efficient organisms, using less energy and producing fewer greenhouse emissions per capita than their surrounding suburbs or newer sprawling metropolises. In a world where carbon emissions exact an environmental cost, water is becoming scarce and oil supplies are in decline, Philadelphia offers distinct competitive advantages.

Philadelphia's challenge then is to seize this moment. It must leverage its existing assets, particularly its transit system and walkable neighborhoods; invest in its existing infrastructure; and flex its economic muscles to attract new residents and companies. The burgeoning "green" economy, with jobs that range from low-skill weatherization to high-skill machining and design, represents an opportunity for Philadelphia to once again be one of the world's workshops.

Department of Transportation estimated that average daily VMT per capita for the Philadelphia region was 20.3 miles in 2007, below that of most other major U.S. cities. DVRPC breaks that figure down by county, showing Philadelphia's daily per capita VMT to be less than 13 miles.

Greenworks Philadelphia projects that local VMT will increase to 6.9 billion by 2015. The goal of *Greenworks Philadelphia* is to keep that total to 5.7 billion miles, a difference of 1.15 billion miles. That would require each Philadelphia household to decrease its driving by less than eleven hundred miles per year. Through operational and capital improvements in public transit, Transit Oriented Development, investments in bike trails and the increased use of car share services, Philadelphia will achieve this goal.

TARGET 12

Reduce Vehicle Miles Traveled by 10 Percent

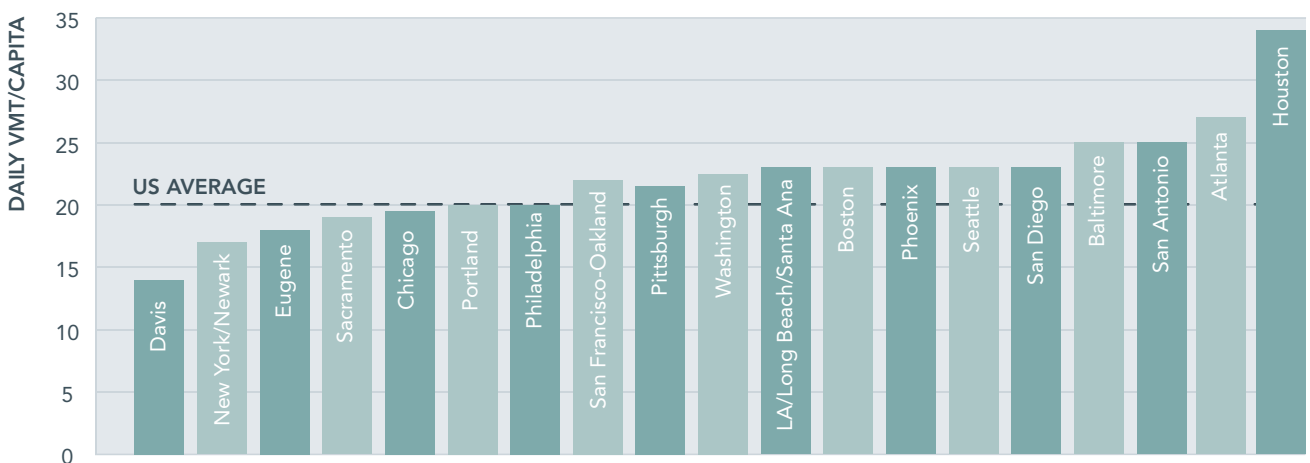
The Delaware Valley Regional Planning Commission (DVRPC) has estimated that passenger vehicles miles traveled (VMT) in Philadelphia totaled 6.4 billion miles in 2005—this estimate included commuter traffic in and out of Philadelphia, but not traffic merely passing through the city. The U.S.

INITIATIVES

Improving Public Transportation

One of Philadelphia's greatest advantages is SEPTA, its dominant public transit agency. With more than 1,800 miles of transit routes in the city, nearly every resident has easy access to a bus, trolley, subway or train. And that access means that SEPTA riders are not only helping save the environment, they are also saving themselves a lot of money. According to the American

Daily VMT Per Capita—Selected US Cities (2007)



SOURCE: FEDERAL HIGHWAY ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION



These improvements to existing infrastructure should help attract more riders to the lines and spur private investment in adjacent neighborhoods.

Ensure Sustained Transit Funding

In 2007, Governor Rendell signed Act 44, which called for a dedicated stream of funds for the state's transit agencies, as well as highway improvements. Passengers have responded well to the service improvements and investments that SEPTA has already made using the increased monies it has received from Harrisburg. However, those funds could dissipate if cities like Philadelphia do not remind the state legislature of the value of public transportation to the local economy and the environment.

In addition, with the reauthorization of the federal Department of Transportation bill slated for the fall of 2009, the City must work with its Congressional delegation to make capital funding for public transportation a priority.

Plan for an Expanded System

While SEPTA is right to focus on fixing existing infrastructure, it must also think about expanding its subway and light rail lines. For example, the Penn Praxis plan for the Delaware River calls for the creation of a light-rail line down Delaware Avenue/Columbus Boulevard, using existing rails. As part of the City's master planning process for the Central Delaware River, this idea should be fleshed out and preliminary cost estimates—both capital and operating—determined.

Other proposals for new rail include extending the Broad Street subway line to the Navy Yard, where 7,000 people currently work. There are plans for even more private investment at this 1,600-acre site, including residential units, which may help the proposed expansion make sense from a cost-benefit perspective.

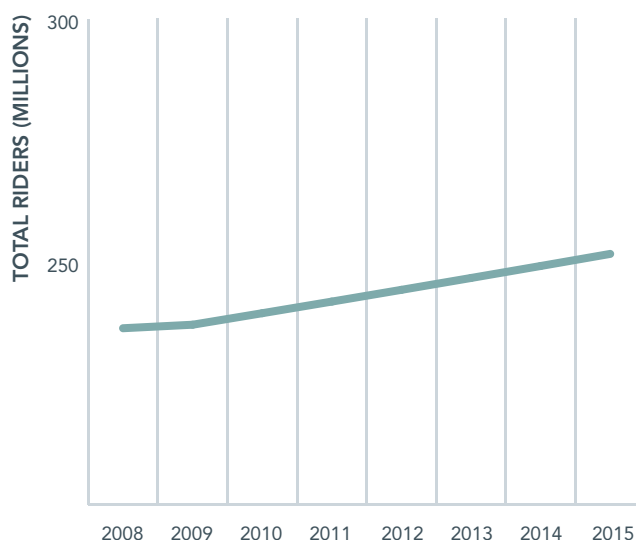
EFFORTS IN NEIGHBORHOODS

Increase Transit-Oriented Development

In many ways, Philadelphia is one big transit-oriented development (TOD). Many neighborhoods grew up around trolley lines (West Philadelphia) and rail stations (Germantown, Mt. Airy and Chestnut Hill). Just as other cities have tried to foster commercial and residential development around newly-created public rail stations, Philadelphia must do the same with the assets it already has.

Working with non-profit partners like Neighborhoods Now, the Nutter Administration is committed to investing in areas adjacent to transit hubs that SEPTA will be renovating. Pilot efforts are being planned for Girard Avenue & Front Street, 46th & Market streets and the Temple University station. In those locations, SEPTA will upgrade stations, making them aesthetically pleasing, well-lit and secure. The City's Streets Department will support these efforts through investments in lighting, sidewalks, bike lanes, street furniture (including bike racks), signage and greening. Car-sharing parking spots will be created. The target areas may also be rezoned to accommodate mixed residential and commercial uses.

Projected Total Ridership



SOURCE: SEPTA

The Pennsylvania Community Transportation Initiative has set aside \$60 million for TOD projects. According to TOD advocates, these public investments will encourage private-sector development in adjacent areas. Philadelphia is well positioned to attract a portion of these public dollars.

Upgrade Commercial Corridors

Philadelphia enjoys many neighborhoods where residents can easily walk to retail stores. Unfortunately, such convenience does not exist everywhere in the city. A number of commercial corridors remain blighted and offer little to attract nearby residents. The City Commerce Department's ReStore Philadelphia program aims to revitalize such corridors through loans and technical assistance. In March 2009, the Commerce Department teamed up with LISC, a national financial intermediary, to create a revolving loan fund to improve struggling commercial corridors. With \$2 million from the City and \$3 million from LISC, the money will supplement the Commerce Department's \$1.2 million Facade Improvement program and \$12 million in federal tax credits for businesses that build in commercial corridors.

A SPOTLIGHT ON BIKES AND PEDESTRIANS

With plenty of flat surfaces, Philadelphia is an easy city to bike in. So it's no surprise that the city has a growing and thriving bicycle scene. About 11,000 Philadelphians currently bike to work each day, about 1.2 percent of the workforce. That number, however, obscures the high ridership found in Center City, and does not count non-work bike trips. More than four out of five Philadelphians who commute on a bicycle live within four miles of City Hall.

And ridership is increasing rapidly. The Bicycle Coalition of Greater Philadelphia measured a 104 percent increase in cyclists crossing Schuylkill River bridges during rush hour from 2005 to 2008, an annual growth rate of 27 percent. The



1990-2008 Comparison (Bikes per hour) at Schuylkill Bridges and Major Intersections

COMMUTING TO WORK	1990	2005	2006	2007	2008
Broad and Chestnut	x	79	44	x	126
38th and Spruce	x	x	129	163	188
Walnut Street Bridge	32	74	118	94	137
South Street Bridge	60	70	107	114	160
Chestnut Street Bridge	18	52	74	108	121
Market Street Bridge	19	46	73	68	68
Spring Garden Bridge	x	x	59	x	115
Schuylkill Crossings Total	x	x	430	x	601
Schuylkill Crossings (w/o Spring Garden)	129	x	371	x	486
Schuylkill Bridges	32	61	86	96	120
All Counted Bridges and Intersections	32	64	86	109	131

SOURCE: BICYCLE COALITION OF GREATER PHILADELPHIA

Coalition credits the 2005 SEPTA Strike, the 2008 rise in gas prices, completion of the Schuylkill River Trail, awareness of global warming and a growing urban bicycle culture.

Philadelphia enjoys 205 miles of bicycle lanes and 32.1 miles of multi-use trails, although there are only four miles of dedicated lanes in Center City. Mayor Nutter created the position of Bicycle and Pedestrian Coordinator to work with non-profit partners to increase the number of bike riders in Philadelphia and develop a city-wide system of on- and off-street bike trails. The goal will be to encourage Philadelphia's drivers—particularly those who make trips between one and five miles—to get out of their cars and onto bikes.

Develop a Pedestrian and Bicycle Master Plan

The Philadelphia City Planning Commission is developing its vision for a continuous bicycle network in the city. This work involves revisiting and remapping the Bicycle Network's 1998 plan, examining how the physical environment has changed in the interim years. The new plan will also propose city-wide policies for sidewalk design and uses within sidewalk space to protect pedestrian corridors. These recommendations could then be incorporated into the City's zoning code.

Build an East-West Bicycle Corridor

Although Philadelphia has an extensive bicycle network, little of it serves bicyclists in or near Center City with its dense concentration of attractions and many residents.

The possibility of expanding Center City bicycle opportunities complements an effort that the Pennsylvania Environmental Council has undertaken to evaluate ways to route the East Coast Greenway through Pennsylvania and Philadelphia. The East Coast Greenway is a 3,000 mile bicycle and pedestrian trail that stretches from Maine to Florida, passing through the centers of the major cities of the East Coast. (It could be considered an urban counterpart to the Appalachian Trail.) One goal of the Greenway is to bring users into the center of cities where most tourist attractions are located. In Philadelphia, the Greenway planners would

like to develop a safe pathway from the Schuylkill to the Delaware Rivers through Center City.

To facilitate this concept, and to begin to address the problem of extending the bicycle network into Philadelphia's downtown neighborhoods, the Bicycle and Pedestrian Coordinator is evaluating how best to establish an east-west bike route in Center City.

Develop More Off-Road Bike Trails

Off-road trails have been shown to attract bicyclists, runners, walkers and others whenever and wherever they are built. The existing trails in Philadelphia are heavily used even though they do not yet form a true network. Trail networks are valuable as recreational spaces, but they also form for bicycle commuters a sort of bicycle freeway system that allow bicyclists to travel more conveniently and comfortably than they can travel on city streets.

The Fairmount Park Commission is currently making plans to complete the missing connection at Ridge Avenue between the trail that runs along the Wissahickon Creek and the Schuylkill River trail. An extension of the Schuylkill River Trail through Manayunk is also being considered. Further south, the Schuylkill River Development Corporation (SRDC) will be letting a contract in May to develop a bike and pedestrian trail within the DuPont Crescent. It is also developing plans for an extension of the existing trail, which ends at Locust Street, to South Street where it will connect with bicycle and pedestrian facilities that are being incorporated into new South Street Bridge. The SCDC is also coordinating the preparation of final design plans for a trail bridge that the Streets Department proposes to construct over the CSX railroad line adjacent to Schuylkill River Park. This bridge is needed to allow trail users to enter and exit the trail when rail cars block the at-grade crossing at Locust Street.

Along the Delaware River, a bike trail from Oregon Avenue to Penn's Landing is being created by the Center City District and will open in 2009, the first step in creating greater public access to Philadelphia's less hidden river.



Further north, the Delaware River City Corporation is developing plans for a continuous multi-use trail that would extend from Penn Treaty Park north to the Bucks County boundary.

Support the Creation of a Bicycle Sharing Program

Originating in European cities such as Paris and Lyon, the idea of a bike sharing program here in Philadelphia has gained momentum over the past two years, as well it should. A bike sharing program enables a person to rent a bicycle at one of many unmanned stations located throughout a city and then return it to another location close to one's final destination. In January 2009, the Bicycle Coalition, using support from the William Penn Foundation, commissioned a study that would define one or more appropriate approaches for establishing such a program in Philadelphia. Among other things, the plan will estimate the potential market, determine a workable and profitable model and describe public involvement scenarios. The Mayor's Office of Transportation and Utilities (MOTU) is working closely with the Bicycle Coalition and supports any model that works for customers and returns value to the operator, as does *Greenworks Philadelphia*.

Expand the Number of Bike Racks

More than 1,400 new bike racks (designed by John Dowlin, a resident of Powelton Village and one of the leaders in the local biking movement) have been installed this past year in commercial districts, at SEPTA bus stops and train stations, outside civic institutions and on college campuses. In each case, community or business organizations or nonprofit groups have agreed to maintain the racks.

To bring even more racks to city neighborhoods, *Greenworks Philadelphia* supports MOTU's interest in working with the Parking Authority to reuse parking meter poles when the multi-space parking stations are installed. The MOTU would also like to continue to work with artists to develop creative and interesting designs for bicycle racks similar to the racks that artists have designed in the New Kensington neighborhood.

Create Bike Parking Stations

With more and more commuters using bicycles, more than new racks will be needed along city streets. In areas with a high density of jobs and therefore a high demand for parking spaces, bike parking stations that could serve 50 or more bicyclists in a concentrated facility will need to be developed. One possible location is the below-ground, unused public space between the Municipal Services Building and the SEPTA concourse at Suburban Station. Access to that space with a bike is currently difficult. But elevators to a parking lot below the adjacent Love Park are about to be replaced and could be built to accept bicycles. The parking station itself would be owned and managed by a private entity. The City's Bicycle and Pedestrian Coordinator will advance this effort, coordinating with the Planning Commission and Public Property.

Design and Implement Complete Streets

In planning and (re)designing streets in Philadelphia, all modes of travel will be taken into consideration, including bicycles, pedestrians and transit vehicles, as well as cars—in other words, “complete streets.” Intersections will be constructed with shorter distances between curbs, making it easier for cars to see pedestrians and pedestrians to cross streets. At intersections with traffic lights, more pedestrian signals with countdowns will be installed. Residential garage parking fronting on residential streets will be discouraged in dense urban neighborhoods so that the sidewalk area can remain a preserve for pedestrians. In commercial districts, access to parking and loading facilities will be designed to minimize disruption to pedestrian routes. *Greenworks Philadelphia* supports the work of Planning Commission in these efforts to make streets friendlier for pedestrians.

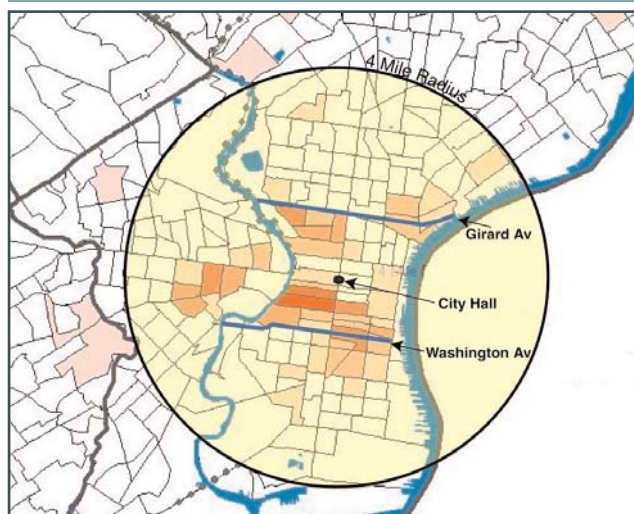
Increase Traffic Calming Measures

Traffic calming refers to those roadway design elements that can be used to control vehicle speeds and, where appropriate, divert vehicle trips so that streets can better relate to the neighborhoods they were designed to serve.

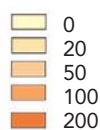
There are numerous areas in Philadelphia where the use of traffic calming measures would be appropriate, especially in areas located outside of Center City where traffic volumes are less dense and vehicle speeds can be higher.

Traffic calming may be especially appropriate in University City, where a number of streets have been improved to provide enhanced access to Center City. As infill development begins to take place on the strip of land on the west bank of the Schuylkill River, planners have designed important traffic calming measures that narrow lanes of traffic, offer rational pedestrian systems and green the area with trees and planters.

83% of Philadelphia Bicycle Commuters Live Within 4 Miles of City Hall



Bike Commuters 2000 Census





These measures will enhance the anticipated redevelopment of Philadelphia’s “Left Bank.”

EXPAND CAR SHARING PROGRAMS

Car sharing services are emerging as an inexpensive and convenient means to travel within Philadelphia, enabling city residents to get rid of their own cars and associated insurance, gasoline and maintenance costs. Car sharing helps reduce the number of cars on Philadelphia’s streets and their attendant congestion, especially in high density neighborhoods. *Greenworks Philadelphia* recommends that the City work with car share entities to expand this model into other neighborhoods, particularly low income, over the next seven years.

Change Tax Classification

In Pennsylvania, car sharing companies are classified for tax purposes as car rental businesses. But because the business model is different—multiple car share users “rent” the same car on any given day versus multi-day, single user rentals for companies like Avis and Hertz—car share companies end up paying more. This is particularly true of the \$2 flat fee per reservation charged by the Commonwealth anytime a new driver gets behind the wheel. A number of states have begun to reclassify car-sharing companies for tax purposes, recognizing the difference in their business model and their local versus tourist customer orientation. *Greenworks Philadelphia* proposes that a similar reclassification occur in Pennsylvania.

Provide On-Street Parking Spots

The Streets Department will continue to work with car sharing companies to provide designated on-street parking for their vehicles.

Reduce Parking Ratios for Buildings with Designated Bike and Car Share spots

The current zoning code requires residential and commercial developers to create on-site parking spaces to accommodate residents or tenants. The current requirements overstate the use of automobiles in dense urban neighborhoods, particularly given the introduction and popularity of car sharing services in Philadelphia. Developers have begun to receive waivers for few parking spaces from the Zoning Board of Adjustment when they include spots for car share services. As part of its Zoning Code review, the Zoning Code Commission should consider easing its current parking requirements when car share and bicycle spots are offered.

TARGET 13

Increase the State of Good Repair in Resilient Infrastructure

Even as Philadelphia envisions a future of new parks, a transformed Delaware riverfront, greened streets and new public buildings, *Greenworks Philadelphia* acknowledges that much of the city’s existing infrastructure needs to be replaced or renovated. Assets are said to be in good repair “when no backlog of needs exists and no component is beyond its useful life.” Using this definition, courtesy of SEPTA, over the next seven

years *Greenworks Philadelphia* recommends that more of the City’s infrastructure move into a state of good repair. Two departments, Streets and Public Property, will be primarily responsible for this effort given their management of most City-owned buildings, streets and bridges.

The Department of Public Property has much work to do. Only 40 percent of its \$4 billion inventory could currently be considered to be in a state of good repair. In 2007, the Pennsylvania Intergovernmental Cooperation Agency (PICA) issued an analysis of City-owned buildings, concluding that the City should be investing \$143.2 million through Fiscal Year 2012, with HVAC systems accounting for \$46 million or 27 percent of this total. These estimates were developed by a team of local architects and engineers who surveyed 3.5 million square feet of city facilities. Yet the City had only \$91 million in capital funds available over that time period. The report noted, for example, that 30 of the City’s fire department facilities lacked fire detection systems and that the Central Library roof leaked so much that the building’s ceilings were crumbling. A separate report by the City Controller’s office in 2007 focused on Philadelphia’s recreation centers and found numerous safety hazards, including exposed electrical wiring, as well as extensive water damage and unusable restrooms. These deficiencies exposed the City to lawsuits that cost taxpayers more than \$4 million between 2003 and 2007.

At the time the PICA report was being prepared for release, the City agreed to create a facilities management database to monitor and track the condition of its many buildings, allowing it to more systematically work through its deferred maintenance needs. It also pledged to develop an asset tagging database so that Public Property could easily access basic information about its inventory. Currently the department must operate without a complete picture of the age of certain systems or structures and when parts might need service or replacement. Public Property has begun to survey its equipment and has to-date inspected 50 percent of its existing inventory. However, this information has not yet been entered into a newly-acquired asset management system, called MAXIMO, because of insufficient resources.

There are two notable examples of departments that have worked to bring their infrastructure into a state of good repair. The Streets Department inspects all of the City-owned bridges on a two-year cycle and methodically works through a needed repair schedule. Unfortunately, however, Phila-

Public Property	
Capital value =	\$4 billion × SOGR = 40%
amount in SOGR =	\$1.6 billion
Streets/Bridges	
est. Capital value =	\$10 billion × SOGR = 67%
amount in SOGR =	\$6.7 billion

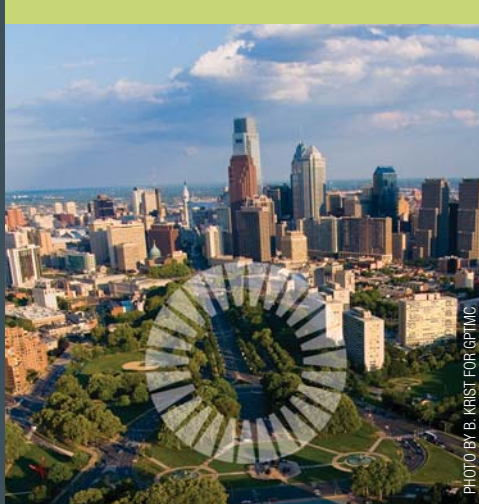
SOGR=STATE OF GOOD REPAIR

SOURCE: CITY OF PHILADELPHIA PLANNING COMMISSION



ACKNOWLEDGEMENTS

Greenworks Philadelphia represents the hard work and aspirations of the many Philadelphians who believe that the city's best days lie ahead. Their efforts to make Philadelphia the greenest city in America inspired the Mayor's Office of Sustainability and to all of you, we say thanks. We also salute our colleagues in City government who created the Sustainability Working Group long before most people even knew what going green meant. *Greenworks Philadelphia* would not have been possible without the groundwork that you laid. We gratefully acknowledge and thank the members of the Mayor's Sustainability Advisory Board, who provided helpful feedback and guidance through the many drafts and iterations of the framework's goals and targets. Finally, *Greenworks Philadelphia* would never have been created without the generous support of the William Penn Foundation, which, like its namesake, believes that Philadelphia should be a green country town.



GREENWORKS

PHILADELPHIA

THE CITY OF PHILADELPHIA

MAYOR'S OFFICE OF SUSTAINABILITY

www.greenworksphila.org