

BICYCLE PARKING:
KEY TO A GREEN PHILADELPHIA



May 2008

Acknowledgements

This report was written by Sarah Clark Stuart. The report relied on the assistance of many Bicycle Coalition volunteers who contributed their time and effort (many did this in cold weather) to count bike racks and take pictures, including Chuck Aronson, Tom Benson, John Boyle, Susan Dannenberg, Luke Elrath, Michael Grabish , Jeffery Hartman, Darren Linkin, Gary Kaplan, Michael McGettigan, Russell Meddin, Jill Minick, Ray Scheinfeld, and Chris Witt. Alex Doty contributed editorial assistance and John Boyle was the go-to guy on everything from facts and figures to great photos and google-map wizardry. David Perri of the Streets Department and Tom Branigan, formerly of the Streets Department, also provided helpful advice and information. All inadvertent mistakes and errors are the author's responsibility. All photos taken by Sarah Clark Stuart, unless otherwise indicated.

All photos used in this report are publicly available at the Philly Bike Parking flickr group site.

<http://www.flickr.com/groups/phillybikeparking/>

Anyone interesting in linking their favorite Philly bike parking photos are welcome .

Bicycle Parking: Key to a Green Philadelphia

Executive Summary

Philadelphia's path to becoming the next great sustainable and green city needs to include stocking up on more and better bicycle parking. In all parts of the City, there is a bicycle parking shortage. More bike parking is essential to encourage more people to use bikes for short trips to get to work and shopping, entertainment and cultural destinations. The Bicycle Coalition of Greater Philadelphia conducted an assessment of bicycle parking at major destinations and corridors in Philadelphia to ascertain the quantity and quality of bicycle parking and to make recommendations.

The results of the Bicycle Coalition bike assessment project show that Philadelphia has a hill to climb. While the City's Streets Department has installed 1200 inverted U racks on sidewalks, and is planning to install 1400 more during 2008, 2600 bike racks is not enough for the estimated 300,000¹ bicyclists who live and work in Philadelphia. Just as important, other major public agencies such as SEPTA, the Parking Authority, the Philadelphia International Airport and many cultural, sports facilities and educational institutions could substantially improve the quantity and quality of bicycle parking facilities it offers commuters, travelers, visitors, and customers.

Based on this study, the Bicycle Coalition recommends that:

1. The City of Philadelphia establish bike parking standards and guidelines
2. The zoning code be amended to require new buildings with car parking be required to provide bicycle parking capacity that is equal to 5% of car parking spaces
3. The zoning code be amended to require new residence and office buildings to set aside space for long-term and short term bicycle parking
4. The Philadelphia Parking Authority (PPA) add bicycle parking at garages and lots that is equal to 5% of car parking spaces.
5. The Philadelphia International Airport and PPA add convenient bicycle parking for employees and travelers
6. SEPTA create bike parking shelters at stations and stops that serve park and ride commuters
7. The South Broad Street Concourse be fitted out as a bike parking station
8. Property managers of existing buildings and garages be encouraged to install bike parking facilities for all day bicycle parking
9. Cultural venues and sports facilities that bring together more than 3000 persons provide bike parking spaces at a rate of 1 space for every 100 attendees.
10. Shopping centers that provide car parking create bike parking spaces that is equal to 5% of car parking spaces

11. Special events that attract over 5000 people such as Welcome America, the International Bicycle Championship, or Live Eight, provide temporary secure bicycle parking as a requirement for obtaining an Managing Directors Office (MDO) special events permit.
12. As the PPA replaces parking meters with multiple-space meter parking, it adds rings to the existing posts to create a space suitable for two bicycles.
13. After evaluating on-street bike parking facilities (“bike corrals”), and based on their performance, the City of Philadelphia establish more bike corrals at targeted areas that are currently overcrowded with sidewalk bike parking.
14. The City of Philadelphia purchase and install 7500 racks on city sidewalks and streets over the next five years.
15. The City of Philadelphia create a “Request A Rack” program for residents and businesses to suggest locations that need sidewalk inverted U racks.
16. The City of Philadelphia encourage and install signage to indicate where bike parking is available.

Why is bike parking important?

Philadelphia has several reasons to become a more bicycle-friendly city and to increase bicycle ridership. First, it has committed to reducing its greenhouse gas (GHG) emissions to 10% of 1990 levels by 2010, and in 2007 produced a Local Action Plan for Climate Change to address how it would meet that goal². As part of that plan, the City of Philadelphia pledged to improve bicycling accessibility as an element of reducing greenhouse gases from the transportation sector, which is responsible for 25% of Philadelphia's total GHG emissions. Second, congestion is a growing problem in certain commercial corridors and business districts that threatens to annoy and drive businesses, residents and visitors away.³ Third, more bicycle parking will help reduce the increasing demand for car parking capacity and save property managers and employers the cost of providing parking.

As of 2006, only 1.2% of commuters in Philadelphia used bicycles, as compared to 2.0% of commuters in Washington DC and 4.2% in Portland, Oregon⁴. In Philadelphia, 50.8% of commuters drove alone⁵. Creating incentives to encourage residents to switch from driving to riding a bicycle for commuting and other trips is in Philadelphia's best interest to reach its goal to reduce greenhouse gas emissions from cars.

However, lack of adequate bike parking is a deterrent to bicyclists using their bicycles, especially for commuting and utilitarian purposes (shopping, errands, entertainment destinations, and appointments.) Fear of bike theft is not unfounded; 1.5 million bicycles are estimated to be stolen in the United States annually⁶.

More secure bicycle parking will induce more people to bike more frequently. A 2005 survey⁷ conducted by the Delaware Valley Regional Planning Commission found that over 70 percent of Delaware Valley bicyclists would bike more if secure bicycle parking was more widely available. Good long and short term bike parking is also good for local businesses. It can increase customer traffic and attract and retain health-conscious employees. Bicycle parking 1) increases parking capacity at little cost, 2) helps a business gain a competitive edge by attracting bicycling customers, and 3) eliminates clutter and unsafe sidewalk conditions.

Status of City-Installed Bike Parking Facilities in Philadelphia

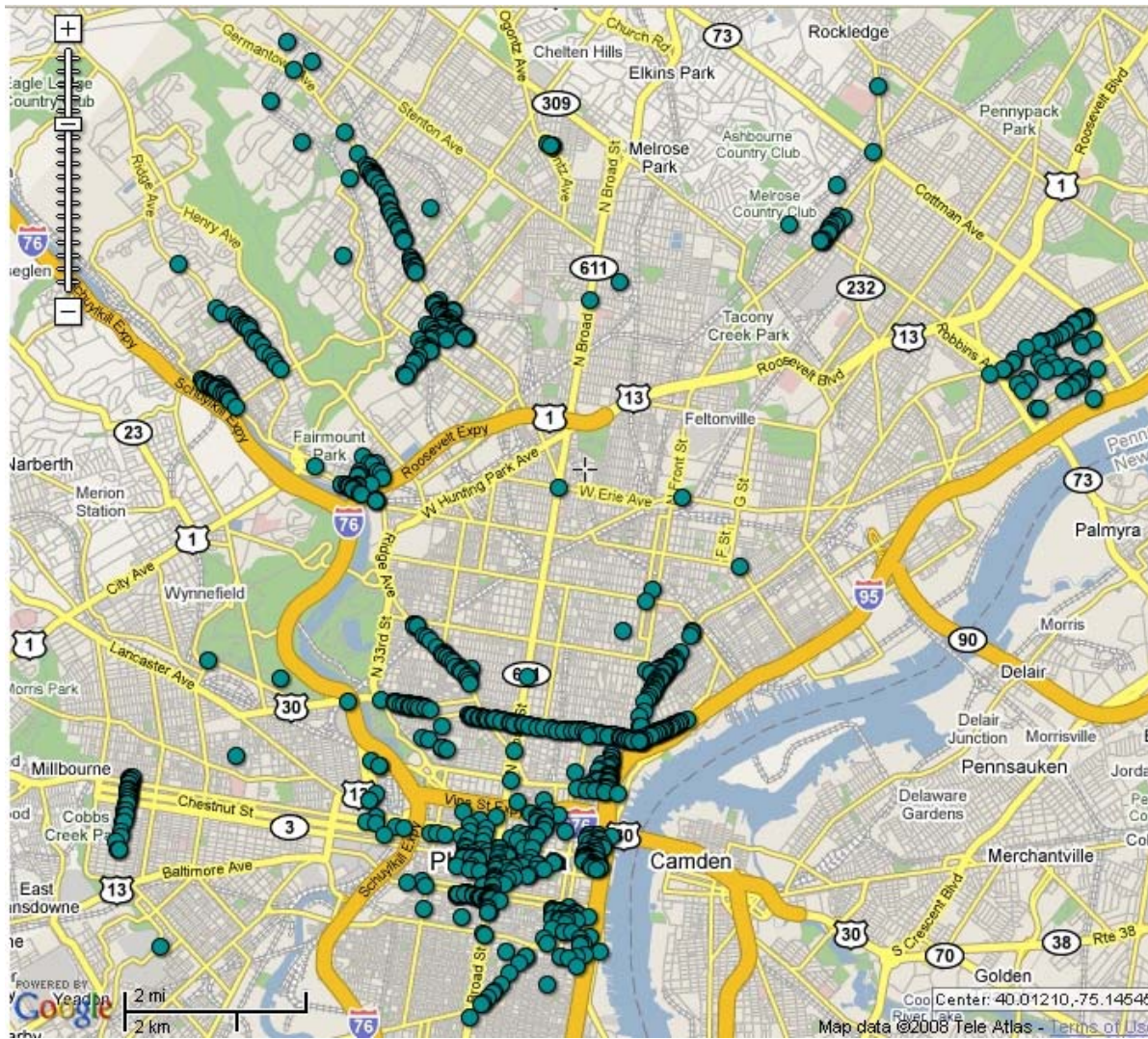
In the late 1990s, the City of Philadelphia's Streets Department obtained federal funding (from the Surface Transportation Program) to install 850 U racks in Center City and University City. Afterwards, when specific transportation projects came up, such as the Chestnut Street Improvement Project (between 18th-16th Streets), bike racks were also installed. In total, the Streets Department installed 1200 racks over the past 10 years⁸.

Although generally requiring little or no maintenance, racks do suffer damage when hit by cars or trucks, or when paint becomes chipped. These issues emerged as a problem for Streets Department due to the lack of maintenance funding to remove and replace racks, or repaint them. The Streets Department decided to resolve this issue in the next round of bike rack installations by establishing agreements with business improvement districts before installing any new bike racks. These agreements made the businesses responsible for maintaining bike racks on an as needed basis.

The "Adopt-A-Rack" contract is the Streets Department's next iteration of bike rack installations. Using federal transportation funds, the Streets Department has planned to purchase and install an additional 1400 racks. It

has mapped out the areas in the rest of the city that needs bike racks, contacted business groups, and lined up “adopt-a-rack” agreements. The “Adopt-A-Rack” contract was originally attached to a big construction project, which got bogged down and thus the contract was stalled for several years. It has now been separated out and packaged as its own contract. The “Adopt-A-Rack” contract is expected to be let in spring/summer 2008. The following map shows the locations of where the City is planning on installing racks in the Adopt-A-Rack contract.

Planned locations of new bike racks under the “Adopt-A-Rack” contract



This map can be viewed at http://www.bicyclecoalition.org/bfvmaps/adopt_a_rack.html

Status of car parking in Philadelphia

The Philadelphia Parking Authority (PPA) maintains 14,500 parking meters,⁹ 17,000 spaces at the Philadelphia International Airport¹⁰, and approximately 9000 spaces in its 40 garages and lots¹¹. In Center City alone, there are 65,000 off street spaces (including PPA garages and lots)¹². The Philadelphia Parking Association (organization of parking companies that operate paid parking lots and garages) does not publish information online on how many private off street spaces its member companies collectively manage. Based on information that is publicly available, Philadelphia has at least 85,000 on-street and off-street public parking spaces for cars.

Bicycle Coalition Bike Parking Assessment Project

The Bicycle Coalition of Greater Philadelphia decided to assess the short-term bicycle parking at major destinations, shopping centers and cultural venues. Bicycle Coalition volunteers visited various destinations throughout Philadelphia to count racks. Sidewalk bicycle (inverted U) racks (installed by the Streets Department) and racks installed by the property owner were counted together. For each property or venue, total parking capacity was calculated; i.e. two (2) bike parking spaces per inverted U rack, plus the number of bikes that could be locked up at a school or wave rack were added together.

Bike Parking Assessment Results

Hospitals

Pennsylvania Hospital	0
Albert Einstein Medical Center	0
Hahnemann Hospital/Drexel School of Medicine	8
Chestnut Hill Hospital	9
Temple School of Podiatric Medicine	18
Veterans Administration Hospital	32
Children's Hospital of Philadelphia	66
Hospital of the University of Pennsylvania	216
Jefferson University Hospital	442

University Buildings

La Salle	0
Moore College	12
AIPH (17th & Chestnut Street)	25
U of Arts (Merriam Theatre)	30
PAFA (Hamilton Hall)	34
Pottruck Gym midblock	40
Temple (Broad & Market)	51
Philadelphia University	120
University of the Arts (Broad Street)	128

Cultural Attractions

Independence Seaport Museum	0
Academy of Natural Sciences	0
Jewish Museum	0
Kent Atwater Museum	0
Perelman Building at Philadelphia Museum of Art	0
University of Pennsylvania Museum of Anthropology at Mann Center for the Performing Arts	0
Prince Music Theatre	2
Pennsylvania Academy of Fine Arts	2
Mummers Museum	2
Academy of Music	4
Walnut St. Theatre (The Forrest)	4
Wilma Theatre	4
Rodin Museum	4
The Bourse	6
African American Museum	6
Liberty Bell	8
Penn's Landing	8
Kimmel Center	8
Pennsylvania Convention Center	12
The Gershman Y	12
National Constitution Center	16
Independence Visitors Center	16
Philadelphia Museum of Art	20
Franklin Institute Science Museum	21
Reading Terminal Market	32

Bookstores & Libraries

La Salle University Bookstore	0
Fox Chase Library (Rhawn and Jeanes St)	2
Holmesburg Library (Frankford Ave)	2
Borders Bookstore	2
Barnes and Noble	6
Bustleton Library (Bustleton and Veree)	8
Drexel Bookstore	9
Roxborough Library (Ridge)	9
Free Library (Eastwick)	11
Philadelphia University Bookstore	12
Temple Bookstore	18
Temple Library	20
Free Library (Main Branch)	30
University of Pennsylvania Bookstore	123

Sports Facilities

Lincoln Financial Field	0
Wachovia Complex	0
Liacouras Center	0
Citizens Bank Park	32
Annenberg	45
Franklin Field	45
Palestra/Hutchinson Gym	63

Movie Theatres

Roxy Theatre	0
Ritz Bourse	0
The Pearl	0
Riverview-United Artists Movie Theatre	2
Ritz East	4
Ritz Five	8
Manayunk Movie Theatres	8
The Bridge	27

Government Buildings

William J. Green Federal Building	0
James A. Byrne Federal Court House	0
U.S. Post Office Postal District	0
Philadelphia Family Court	8
Parking Authority Garages & Lots	14
Philadelphia City Hall	16
Municipal Services Building	20
1515 Arch Street	22

Transportation Centers

RiverLink Ferry Terminal	0
Greyhound Bus Terminal	0
Philadelphia International Airport	0
Amtrak North Philadelphia	0
SEPTA North Philadelphia	0
SEPTA Olney Transfer Station	0
SEPTA Broad Street & Pattison Avenue station	0
SEPTA Broad Street & Federal station	0
SEPTA Suburban Station	16
Amtrak 30th St. Station	74
SEPTA Frankford Transportation Center	78

Shopping Centers

Lowes (Columbus Boulevard)	0
Superfresh (Columbus Boulevard)	0
Home Depot (Columbus Boulevard)	0
Kmart (Oregon Avenue)	0
Pathmark (Oregon Avenue)	0
Staples (Quartermaster Plaza)	0
Home Depot (Quartermaster Plaza)	0
Deals (Oregon Avenue)	0
Pennrose (SW Phila)	0
Ivridge Shopping Center (Pathmark)	0
Andorra Shopping Center	0
Rising Sun Plaza	0
Olney One Plaza	0
Cottman and Bustleton	0
Somerton Shopping Cntr	0
Roosevelt Boulevard Shopping Centers	0

Fairmount Park

Aviator Park	0
Memorial Hall	0
Horticultural Center	0
Boathouse Row	8
Schuylkill Banks	10
Franklin Square	12
Love Park	18
Lloyd Hall	24
Rittenhouse Square	38

Commercial Corridors

Ridge Ave (entire length)	0
Germantown Ave. Shopping District	0
Italian Market	0
Washington Avenue (entire length)	0
Walnut & 33rd	0
Walnut & 34th	0
Main St. Manayunk	2
TLA Video (strip mall on Germantown Av)	2
Walnut (b/w 24th and Broad)	26
Walnut & 40th	30
Walnut & 37th	53
Chestnut (b/w 24th and Broad)	59

Best Buy (Columbus Boulevard)	2
Fresh Grocer (56 & Chestnut St.)	4
Shoprite (South Phila)	5
Wal Mart (Franklin Mills)	5
Shoprite (Snyder Plaza)	6
Target (Snyder Plaza)	6
AC Moore (Columbus Boulevard)	7
Superfresh (South St.)	8
Shoprite (7000 Ridge)	8
Super Fresh Market (Mermaid Lane)	8
Farmer's Market (Southampton Ave)	9
Grays Ferry Pathmark	10
Fresh Grocer (40th St)	11
Ikea (Columbus Boulevard)	11
Metropolitan Bakery (West Phila)	12
Gallery Place/Market East	16
Franklin Mills	16
BJs (Quartermaster Plaza)	18
Whole Foods (Callowhill)	20
Walmart (Columbus Boulevard)	20
Trader Joes	30
Whole Foods (South St.)	30

Summary of Findings

The Bicycle Coalition's assessment shows that while some Philadelphia destinations have some bike parking, many destinations in Philadelphia lack any or lack adequate bike parking capacity; have bicycle parking that is poorly sited, or have poor quality bike parking equipment. Some destinations stand out as having good quality bike parking.

NO BICYCLE PARKING

Cultural Attractions

Independence Seaport Museum
Academy of Natural Sciences
Jewish Museum
Kent Atwater Museum
Perelman Building at Philadelphia Museum of Art
University of Pennsylvania Museum of Anthropology and Archeology
Mann Center for the Performing Arts

Sports Facilities

Lincoln Financial Field
Wachovia Complex
Liacouras Center

Bookstores & Movies

La Salle University Bookstore
Roxy Theatre
Ritz Bourse
The Pearl

Government Buildings

William J. Green Federal Building
James A. Byrne Federal Court House
U.S. Post Office Postal District

Hospitals & Universities

Pennsylvania Hospital
Albert Einstein Medical Center
La Salle

Commercial Corridors

Germantown Avenue--Chestnut Hill
Ridge Avenue--Roxborough
Main Street--Manayunk
Italian Market
Washington Avenue (entire length)

Transportation Centers

RiverLink Ferry Terminal
Greyhound Bus Terminal
Philadelphia International Airport
Amtrak North Philadelphia
SEPTA North Philadelphia
SEPTA Olney Transfer Station
SEPTA Broad Street & Pattison Avenue station
SEPTA Broad and Federal station

Shopping Centers

Lowes (Columbus Boulevard)
Superfresh (Columbus Boulevard)
Home Depot (Columbus Boulevard)
Kmart (Oregon Avenue)
Pathmark (Oregon Avenue)
Staples (Quartermaster Plaza)
Home Depot (Quartermaster Plaza)
Deals (Oregon Avenue)
Pennrose (SW Phila)
Ivyridge Shopping Center (Pathmark)
Andorra Shopping Center
Rising Sun Plaza
Olney One Plaza
Cottman and Bustleton
Somerton Shopping Cntr
Roosevelt Boulevard Shopping Centers

Photos below of six locations without bike parking.

Many more photos can be seen at <http://www.flickr.com/groups/phillybikeparking/pool/>



1. The Academy of Natural Sciences lacks any bicycle parking



2. There is no street bicycle parking around the Pennsylvania Hospital



3. The lack of bike parking at the University City train stop leads to inappropriate bike parking (photo by Mike McGettigan)



4. The Independence Seaport Museum



5. Broad and Federal SEPTA stop (photo by Mike Grabish)



6. Liacouras Center (stock photo)

Venues and Corridors that Need More Bike Parking Capacity

Many destinations have some bike parking, but not enough based on overcrowding at its current facilities, or in comparison to the quantity of available car parking.

VENUES AND BLOCKS THAT NEED MORE BICYCLE PARKING

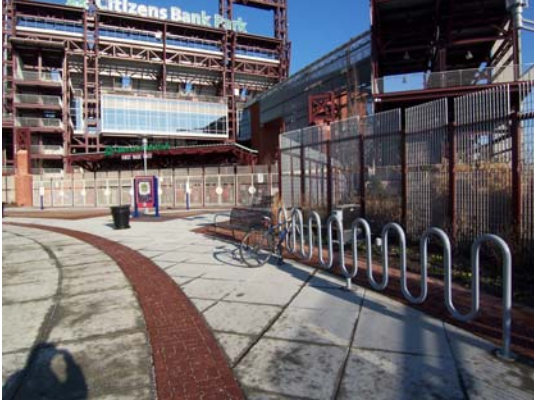
Prince Music Theatre	2	Philadelphia City Hall	16
Pennsylvania Academy of Fine Arts	2	Moore College	12
Mummers Museum	2	AIPH (17th & Chestnut Street)	25
Academy of Music	4	U of Arts (Merriam Theatre)	30
Walnut St. Theatre (The Forrest)	4	Temple (Broad & Market)	51
Wilma Theatre	4	University of the Arts (Broad Street)	128
Rodin Museum	4		
The Bourse	6	Broad Street b/w Pine and Walnut (east and west sides)	
African American Museum	6	Chestnut b/w 19 th & 15 th	
Liberty Bell	8	Chestnut & Broad (all corners)	
Penn's Landing	8	Chestnut b/w Broad and Juniper	
Kimmel Center	8	Walnut & 18 th (all corners)	
Pennsylvania Convention Center	12	Walnut b/w 18 th & 15 th	
The Gershman Y	12	1515 Arch Street	
Citizens Bank Park	32	City Hall	
Riverview-United Artists Movie Theatre	2	W. Market St. b/w 21 st and 15 th	
Ritz East	4	E. Market St. b/w Broad and 12 th	
Ritz Five	8	E. Market b/w 5 th and 2 nd	
Manayunk Movie Theatres	8	Filbert St. b/w 12 th and 11 th	
Parking Authority Garages & Lots	14	Sansom St. b/w 34 th and Penn Law School	



7. Multiple "school" racks in front of the University of Arts on Broad Street frequently overflow with bikes.



8. Bicycles on Chestnut St. in front of the Arts Institute of Philadelphia (b/w 16th and 17th) are frequently locked to trees, trash cans and street posts because of a lack of racks.



9. Citizens Bank Park, which can seat 43,500 fans, has two “wave” racks that can fit a maximum of 32 bike racks, as compared to 20,000 auto spaces. (Photo by John Boyle)



10. Penn's Landing has room for 8 bikes, as compared to 1,980 auto spaces



11. Insufficient bike parking facilities at Temple's downtown campus leads bicyclists to use the plaza's railings.



Bike Parking Not Located Properly

Some facilities have bike parking, but it is either not well located, or placed in such a way as to discourage its use.



12. Two inverted U racks placed out from under cover are less desirable than the railing, which provides better protection from poor weather.



13. The lack of any bike parking on the eastern side of the Philadelphia Museum of Art by the Rocky statue and steps leads many to park their bikes inappropriately. (Photo by Chuck Aronson)

Poor Quality Bike Parking Equipment

Many destinations, buildings, and facilities use “wave” and “school” racks, which are not recommended because they do not provide enough space to securely lock both a bike’s frame and wheels.



14. (Left to right) Temple University in front of Citizens Bank on 15th and Market Streets; Lloyd Hall (photo by Chuck Aronson); AC Moore on Columbus Boulevard (photo by Luke Elrath); Palmer Playground in Northeast Philadelphia (photo by John Boyle)



15. A frequent problem with school racks is that they are placed too close to a wall, preventing the bicycle from being put through the racks. (Photo of Acme at 19th and Oregon by Jill Minick)

Examples of Good Bike Parking

Some facilities stand out as having good bike parking equipment that is well placed (Temple School of Podiatric Medicine; 30th Street Station, Veterans Administration Hospital, Central Branch of the Free Library). Philadelphia also has good examples of creative and innovative bike parking facilities.



16. (left to right) Temple School of Podiatric Medicine; 30th Street Station; Veterans Administration Hospital (inside garage-photo by Darren Linkin); Central Branch of the Free Library; bollard racks at Broad and Sansom (photo by John Boyle); modified U racks at Eastwick Library (photo by Jill Minick).

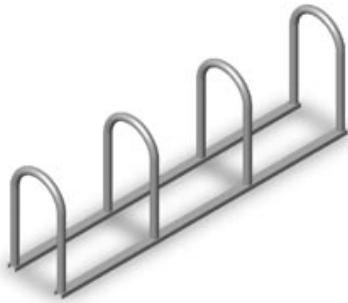


17. (Left to Right) Devil rack installed by New Kensington CDC on Frankford Avenue (photo by John Boyle); Hanging Rack in front of North Bowl on 2nd Street; ball and posts at 15th and Arch Parking Authority lot (phot by John Boyle); rings at the Standard Tap; Chainring rack at Palmer Park (photo by John Boyle)

Good Bike Parking versus Bad Bike Parking

Philadelphia needs more state-of-the-art bike parking facilities. It needs both more parking facilities for all-day bike parking at places of work and residences, and short-term “visitor” parking on the street in commercial corridors and at major destinations. Visitor (short-term) bicycle parking should be visible to bicyclists, convenient to street access, within view of passers-by to increase security, covered for weather protection, and placed so that it avoids conflicts with pedestrians and automobiles¹³.

A bike rack should be able to do support the bicycle upright by its frame in two places and enable the bike frame and one wheel to be secured. The Association of Pedestrian and Bicycle Professionals (APBP) has guidance on appropriate bike parking racks and how to locate them. The APBP does recommend the inverted “U” rack, “A” racks, and post and loop racks. Each of these racks can accommodate two bikes. The best way to accommodate multiple bicycles in one location is to group individual racks in aisles, or use combined U rack systems that sit on rails. The APBP does not recommend comb (commonly known as school) racks, “wave” racks or “toast” racks, because these types of racks do not support bike frames and hold only one wheel. A substantial number of multiple racks used by schools and private sector buildings and companies in Philadelphia are school and wave racks. An excerpt of the Association of Pedestrian and Bicycle Professionals (APBP) guidance on “rack elements” follows this page.



18. a. “Ganged” inverted U racks (www.saris.com)



b. Inverted U rack



a. Post and Ring Racks (Bike Rack Mfg & Dist. Company)

1. THE RACK ELEMENT

Definition: the rack element is the part of the bike rack that supports one bicycle.

The rack element should:

- Support the bicycle upright by its frame in two places
- Prevent the wheel of the bicycle from tipping over
- Enable the frame and one or both wheels to be secured
- Support bicycles without a diamond-shaped frame with a horizontal top tube (e.g. a mixte frame)
- Allow front-in parking: a U-lock should be able to lock the front wheel and the down tube of an upright bicycle
- Allow back-in parking: a U-lock should be able to lock the rear wheel and seat tube of the bicycle



Comb, toast, school-yard, and other wheel-bending racks that provide no support for the bicycle frame are NOT recommended.

The rack element should resist being cut or detached using common hand tools, especially those that can be concealed in a backpack. Such tools include bolt cutters, pipe cutters, wrenches, and pry bars.



INVERTED "U"

One rack element supports two bikes.



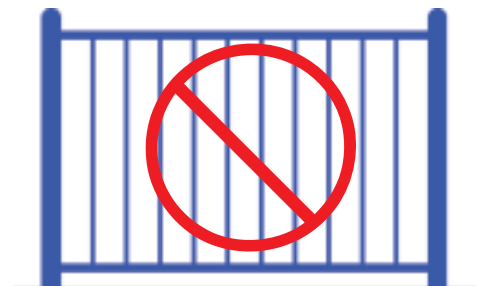
"A"

One rack element supports two bikes.



POST AND LOOP

One rack element supports two bikes.



COMB

One rack element is a vertical segment of the rack.

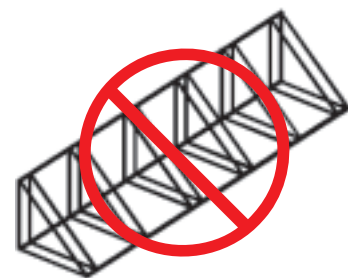


Not recommended



WAVE

One rack element is a vertical segment of the rack. (see additional discussion on page 3)



TOAST

One rack element holds one wheel of a bike.

Recommendations how Philadelphia can increase bike parking capacity

New bike parking capacity should be created by the public and private sectors to accommodate both all day bike parking for bicycle commuters, bicycle owners at their residences, and short term bike parking for visitors to businesses, office buildings, cultural institutions, sports facilities and other public venues.

The first step for Philadelphia would be to establish bike parking standards and guidelines for appropriate bike parking equipment, spacing and siting recommendations, and minimum number of required bicycle parking spaces for different buildings and venues. Many municipalities have such standards that can serve as examples for Philadelphia (see Appendix 1). For example, bike parking space can be set as a percentage (5%) of car parking spaces, per the number of event visitors, or per square feet of office space. The Bicycle Coalition of Greater Philadelphia offers these recommendations.

ALL-DAY BICYCLE PARKING

New car parking garages and lots. Any new business, or business that changes its use, that is required to provide “accessory” vehicular parking spaces should also provide bike racks or bike parking facilities. This requirement should also apply to any new garage or parking lot. The City’s zoning code could be amended to require that new vehicular parking facilities provide bike parking spaces at a rate of 5% of auto parking spaces provided.

New Office Buildings. Any new office building that is erected should provide one (1) employee bicycle parking space for every 7,500 square feet of office floor area, and one (1) additional visitor bike parking space for every 20,000 of office floor area¹⁴.

New Residential Buildings. Any new residential building that is erected should provide one (1) resident bicycle parking space for every three (3) residential units and one (1) visitor space for every 50 residential units¹⁵.

Philadelphia Parking Authority (PPA) Garages and Lots. All PPA garages and lots should provide bicycle parking facilities as well as vehicular parking spaces. PPA could evaluate its garages and lots to determine which ones have space that could be converted to bike parking, ideally at a rate of 5% of its auto parking spaces.

Philadelphia International Airport. PPA and the Division of Aviation should create bike parking stations in its short term garages for employees and those travelers who want to arrive and depart by bicycle.

Targeted SEPTA transportation stations. SEPTA stations that serve park & ride commuters should provide bike parking shelters to allow passengers to park their bicycles safely for the day. Washington DC provides covered shelters next to many of its METRO stops for commuters. SEPTA could do this at targeted train and subway stations that serve high volumes of daily commuters.



19. Bicycle parking at the Washington DC Metro Woodley stop

Bicycle parking stations on the Concourse. The underutilized Concourse under South Broad Street has the potential to be a long term bicycle parking station. Elevators at Broad and Walnut and 15th and Locust could be made suitable for entry points.

Existing Office Buildings/Garages. Large employers or owners and property managers of existing office buildings should voluntarily evaluate how to add bicycle parking in their basements or existing parking facilities for all-day parking for bike commuters, ideally at a rate of 5% of car spaces.

SHORT TERM BICYCLE PARKING

Large public assembly buildings. Cultural venues and sports facilities that bring together more than 3000 persons should provide bike parking spaces at a rate of 1 space for every 100 attendees. The City's property maintenance code could be amended to make this a requirement.

Shopping Centers. Shopping centers that provide car parking should create bike parking spaces at a rate of 5% of the number of spaces provided for automobiles.

Managing Director Office's Special Events Permits. Special events that attract over 5000 people such as Welcome America, the International Bicycle Championship, or Live Eight, should provide temporary secure bicycle parking as a requirement for obtaining an MDO special events permit.

Convert unused parking meters. As the PPA replaces parking meters with multiple-space meter parking, the PPA could add a ring to the existing meter posts to create a space suitable for two bicycles, as done by Arlington, Virginia. (ring made by Creative Metal Works).



20. Arlington, Virginia bike ring

Install 7500 racks on city sidewalks and streets. Philadelphia should continue to install inverted U-racks on city sidewalks to increase the capacity for short-term parking. Once the current contract of 1400 U-racks is installed, the City should seek federal funds to install 1500 racks per year for five years until it has installed 10,000 bike racks throughout the City, but especially targeting those areas that are overcrowded and need more capacity.

Create a “Request A Rack” Program. Between 1993 and 2005 Chicago installed 10,000 racks throughout the city, and now installs 500 bike racks per year¹⁶. It has an [online form](#) for residents and businesses to suggest locations that need racks. Philadelphia could establish a similar process to facilitate targeting the installation of new racks in areas that need and want more bike racks.

On-street bike parking. One (1) on-street car parking space can be converted into eight (8) bicycle parking spaces by installing bollards and 4 “ganged” U racks that sit on rails. 4 Inverted U racks (which can fit 8 bike parking spaces) need 12.5 by 6 feet of floor space. The Streets Department could substantially expand bike parking capacity by creating on street bike parking facilities (“bike corrals”), especially along streets that are currently in high demand for bike parking and there is minimal sidewalk space. On-street bicycle parking facilities could greatly increase bike parking capacity along commercial corridors and around areas of high bike parking, especially in Center City and University City in areas with high traffic near restaurants bookstores and university classroom buildings. Portland, Oregon has to date created six “bike corrals.” New York City widened sidewalks in Williamsburg, Brooklyn to accomplish the same goal.



21. Portland, Oregon (photo by wittco.gbmh)



22. Williamsburg, Brooklyn

Add signage to indicate where bike parking is available. Frequently, bicyclists don't know where parking facilities are located because they are out of view or not immediately in front of entrances. Signage would help direct bicyclists to appropriate parking.



D4-3
Sign image from the Manual of Traffic Signs - <http://www.trafficops.us>
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www.trafficops.us



from the City of Portland

¹ The National Highway Traffic Safety Administration found that that 27.3% of driving age public (over 16 years of age) bicycle once a month in warm weather. (2002 National Survey of Pedestrian and Bicyclist Attitudes and Behaviors, Highlights Report. U.S. Department of Transportation's National Highway Traffic Safety Administration and the Bureau of Transportation Statistics). According to the 2000 census, there were 1.134 million persons 18 years and older in the City of Philadelphia (<http://philadelphia.areaconnect.com/statistics.htm>). 27% of that population is 300,000.

² <http://www.phila.gov/green/LocalAction/pdf/PhiladelphiaClimateChangeLocalActionPlan2007.pdf>

³ 2008. Center City District-Central Philadelphia Transportation Management Association. Managing Success in Center City: Reducing Congestion, Enhancing Public Spaces.

⁴ 2006 American Community Survey, U.S. Census Bureau. (Commuting Characteristics by Sex Table S0801)

⁵ 2006 American Community Survey. U.S. Census Bureau. <http://tinyurl.com/2b9f8u>

⁶ <http://www.stolenbicycleregistry.com/links.php>

⁷ Delaware Valley Regional Planning Commission. 2007. Bicycling in the Delaware Valley in 2005. Figure 70 on page 40.

⁸ Thomas Branigan, former Streets Department Engineer and Bicycle Coordinator, personal communication

⁹ http://www.philapark.org/findparking/on_street.aspx

¹⁰ <http://www.philapark.org/findparking/airport.aspx>

¹¹ 9000 was calculated based on car space capacity at Center City off-street facilities and neighborhood lots provided by Parking Authority's Office of Off-Street Operations

¹² Ben Ginsberg, Center City District. Personal Communication.

¹³ International Bicycle Fund. Bicycle Parking Planning Criteria. <http://www.ibike.org/engineering/parking.htm>

¹⁴ Standard used by Arlington, Virginia.

¹⁵ Ibid.

¹⁶ City of Chicago Bike 2015's Plan: Chapter 3 on Bike Parking. http://www.bike2015plan.org/chapter3/chap3_obj1.html

APPENDIX 1. BIKE PARKING RESOURCES

Municipal Bike Parking Policies, Standards & Programs	Arlington, Virginia	http://www.bikearlington.com/parking.cfm
	Chicago, Illinois	http://tinyurl.com/6hocj2
	Bike 2015 Plan	http://www.bike2015plan.org/chapter3/chap3.html
	Washington, DC	http://tinyurl.com/6h2myw
	Portland, Oregon	http://tinyurl.com/33ubqb
	New York City	http://www.nyc.gov/html/dot/html/bicyclists/bikeparking.shtml
	Cambridge, MA	http://www.ci.cambridge.ma.us/CDD/cp/zng/zord/zo_article6_1307.pdf
	Bike Parking Requirements Comparison of 145 jurisdictions (2002)	http://www.massbike.org/bikelaw/parkcomp1.htm
Sources of Information	Association of Pedestrian and Bicycle Professionals	http://www.bikearlington.com/docs/Bicycle%20Parking%20Guidelines.pdf
	Bicycle and Pedestrian Provisions of Federal Transportation Legislation	http://www.fhwa.dot.gov/environment/bikeped/BP-Guid.htm
	Massachusetts Bicycle Coalition	http://www.massbike.org/bikelaw/parking.htm
	Bicyclinginfo.org	http://www.bicyclinginfo.org/engineering/parking.cfm
	International Bicycle Fund	http://www.ibike.org/engineering/parking.htm
	Victoria Transport Policy Institute	http://www.vtpi.org/tdm/tdm85.htm
Major Sports Venues that Embrace Bicycle Parking	Washington Nationals Stadium	http://washington.nationals.mlb.com/was/ballpark/directions.jsp?loc=bike

Appendix 2. Sampling of Bike Parking Equipment Companies

bikeparking.com	www.bikeparking.com	Multiple u racks
Bike Rack Mfg & Dist	www.bikerack.ca	Post and rings; vertical bike systems
Dero	www.dero.com	Bike hitch, u racks, bike shelters
Saris	www.saris.com	Ganged – stadium rack; meter ring; U racks
Madrax	www.madrax.com	U racks on rails
Barco Products	www.barcoproducts.com	U racks
Creative Pipe	www.creativepipe.com/bike_racks.htm	U racks
	www.creativepipe.com/gauntlet_gl_series_bike_racks.htm	Gauntlet racks
Creative Metal Works	creativemetalworksllc.com	Welded bike circle