



 **NYRIDER**
THE CYCLIST'S
GUIDE TO
NEW YORK CITY

Table of Contents.

Introduction	02
Bike History in NYC	04
The Benefits of Cycling	10
Bike Safety and Rules	14
Bike Types	18
NYC Bike Shops	34
NYC Bike Map	40
NYC Bike Events	42
Summary	48
Citation	49

Intro duction.

WHERE WILL THE RIDE TAKE YOU?

Cycling in NYC is associated with mixed cycling conditions that include dense urban proximities, relatively flat terrain, congested road ways with “stop-and-go” traffic, and many streets with heavy pedestrian activity. The city’s large cycling population includes utility cyclists, such as delivery and messenger services; cycling clubs for recreational cyclists; and, commuters.

Bicycles are one of the most ubiquitous forms of transportation in the world. Most children remember their first bike; with it came the chance to explore their world with more freedom than ever before. As we grow, however, bicycling becomes more than just a childhood rite of passage. Wind in our hair and feet on the pedals, we have several good reasons to climb on and take a trip. Much of the world uses bicycles as a primary form of daily transportation.

What would take several hours of travel on foot becomes faster and more efficient on two wheels. And, some cyclists take trips across entire states or cross-country solely on a bicycle. Reaching speeds of 15-19 miles an hour is achievable by beginning cyclists, while more experienced riders can reach speeds equivalent to automobile travel. “Centuryriders” travel 100 miles or more within a typical day. Not to be constrained by simple transportation, bicycles have helped people become healthier by

losing excess weight and improving cardiovascular fitness. The exercise benefits of cycling are well known. Using the largest muscles in the body, bicycling allows riders to reach aerobic heart rates that drive up metabolism, and give a good workout. With the relative new comer in the bicycle world, mountain bikes, this form of transportation is taking us on rugged terrain once thought impassable by anything other than hiking boots or pack animals.



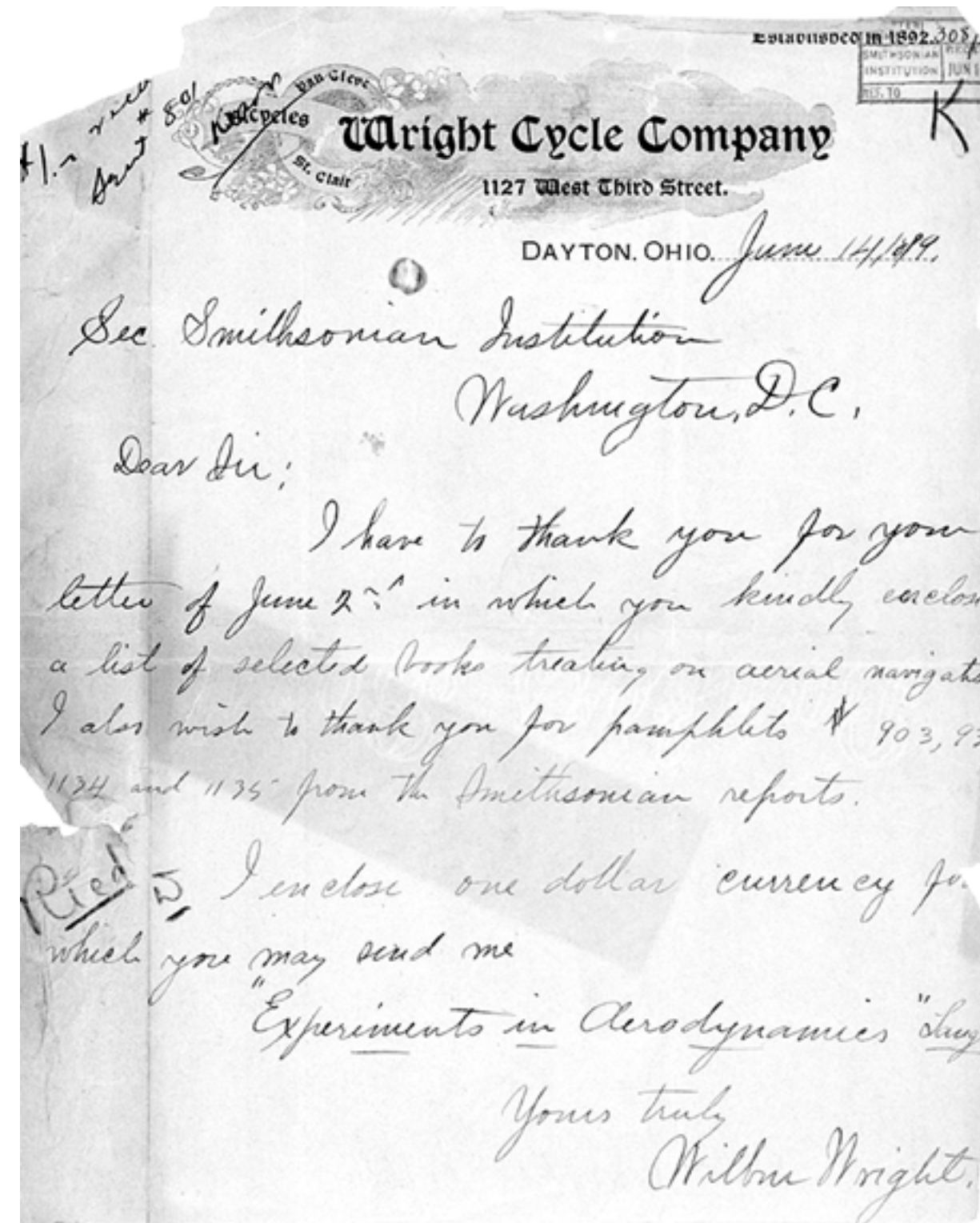
“As a kid I had a dream - I wanted to own my own bicycle. When I got the bike I must have been the happiest boy in Liverpool, maybe the world. I lived for that bike. Most kids left their bike in the backyard at night. But not me. I insisted on taking mine indoors and the first night I even kept it in my bed.”

-John Lennon

Bike History in NYC.

THE BIKE BOOM OF THE LATE 19TH CENTURY

The City of Brooklyn was especially responsive, providing accommodation in Eastern Parkway, Ocean Parkway, and elsewhere. New York didn't produce as many bicycles as other cities, so imported many from elsewhere, including Freehold Township, New Jersey, and Connecticut.



“If we all worked on the assumption that what is accepted as true is really true, there would be little hope of advance.”
-Orville Wright



BICYCLE SHOP OWNERS MADE A TIDY LIVING

The Wright Brothers paid for their aviation experiments from the profits generated in their bike shop, founded in 1892.

The Speedy Cycle Works, was profitable for many years. In 1897, their best year, they made \$3000 between them at a time when a very respectable white-collar wage was \$500 per year.

One of the reasons bike shops made so much money apart from the crazed cravings of customers, who had to have the buzz product of the day was because of manufacturer's sales tactics that would later be taken up with gusto by automobile manufacturers. Bikes were bought on credit, with instalment payments a novelty at the time. Bicycle manufacturers also innovated with "planned obsolescence", creating models with short lifespans before another, improved model came out (it was manufacturers who most benefitted from this; bike

shops had to offer trade in deals and then off load "dated" bicycles as secondhand machines, these went for as low as \$15, making bicycles more affordable for the masses, the bicycle was soon to become, truly, the "peoples' nag").



OLD TIME BICYCLING: VELOCIPEDE MANIA SWEEPS NY

Recent news about the new bike sharing program in NYC and an upcoming bicycle tour of the Champlain Canalway Trail illustrate the ongoing love affair New Yorkers have with two-wheel transportation.

Statewide interest in bicycling exploded in New York State 144 years ago when newspapers began to warn readers about an impending “fearful outbreak” of “velocipede mania.” According to the January 10, 1869 issue of the New York Times, the first sight of a velocipede created “wonder and amazement among all classes” which made them “anxious to mount the fiery steed.”

The velocipede was an advance over the two-wheeled vehicle known as the “hobby horse” or “draisine” which had been patented in Germany in 1818. It was propelled by the rider’s feet, walking or running. The velocipede adapted the hobby horse by adding cranks and pedals to the front wheel. The new vehicles became known as bicycles or velocipedes by enthusiasts, and boneshakers by detractors. They were heavy, weighing about 60 pounds, and difficult to mount. To brake a velocipede, a rider had to back peddle and pull a cord near the handlebars which activated a spoon brake on the back wheel.

On some models, there were curved leg rests projecting out over the front wheels that a rider going downhill could use to raise his or her feet from the rapidly spinning pedals. The frame was made of wrought iron and the wheels and spokes were wood. It had iron tires. The axle bushings were made of bronze and lubricated with whale oil.

The major velocipede manufacturers in the state were located in New York City. They included the carriage maker Calvin Witty, and the firms of Pickering and Davis and G.H. Mercer and Monad. New velocipedes were priced from \$100 (about \$1,700 in today’s dollars) for a plain model.

As interest in the velocipede mushroomed into a full fledged mania, devotees organized velocipede riding academies and bicycle clubs. Sheet music for new songs such as “The Velocipede Galop,” and “The New Velocipede,” appeared in music stores.

Indoor velocipede rinks opened throughout New York State from West Troy, Saratoga and Malone in the east, to Gowanda and Buffalo in the west. In several urban centers, entrepreneurs found new uses for old buildings to meet the growing demand for smooth, safe places to ride—a freight house in Albany and an art gallery in New York City were converted into velocipede rinks.

Toward the end of 1869, there were signs that velocipede mania was coming to an end. Only three velocipedists entered a race at the Albany fair grounds. Use of velocipede rinks in New York City had declined. In fact, some rinks had become “the resort of roughs who monopolize the floors.” Second-hand prices for velocipedes had sunk to an average of \$22 (about \$380 in today’s dollars).

Evolution of the Bicycle

from 1817 to 2000

1817



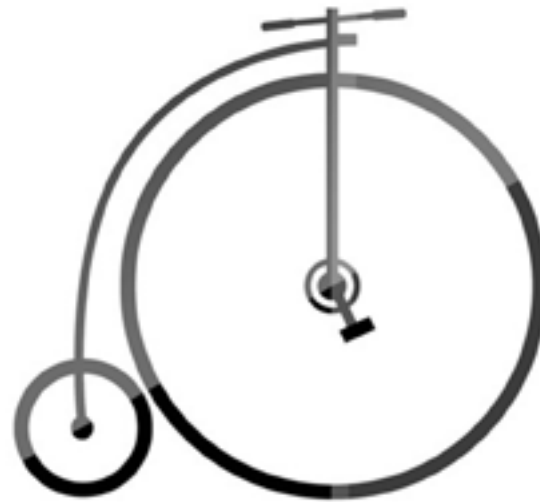
**1817
DRAISINE**

1830



**1830
TRICYCLE VELOCIPEDE**

1870



**1870
HIGH-WHEEL BICYCLE**

1885



**1885
SAFETY BICYCLE**

1960



**1960
RACING BIKE**

2000



**2000
MOUNTAIN BIKE**

The Draisine is the first verified bicycle design. Baron Karl Von Brais created the Draisine in 1817 as a walking machine to make strolls around the garden more comfortable. The machine did not have pedals and was ineffective over most terrain.

In 1865, the Velocipede, meaning 'fast foot', was introduced. This machine had pedals attached to the front wheel and was made primarily out of wood. The hardness of the bicycle combined with bumpy cobblestone roads made riding uncomfortable and earned it the nickname boneshaker.

Around 1870, the High Wheeled bicycle popularized bicycles for young, sporty, and wealthy men. The pedals were still attached to the front tire and the high front wheel made them prone to falling forward.

In the late 1800s the Safety Bicycle made cycling less dangerous; the lower front wheel meant cyclists could easily reach the ground with their feet. The Safety Bicycle design continued to evolve as better materials were made available and people sought a more comfortable ride.

By the time the 19th century was coming to an end, bicycling became a real passion and touring on bicycles and organizing bicycle races became the norm. As a consequence, racing bicycles and mountain bicycles came into existence.

Throughout the 1990s and first decade of the 21st century, mountain biking moved from a little-known sport to a mainstream activity. Mountain bikes and mountain bike gear that was once only available at specialty shops or via mail order became available at many bike stores.

The Benefits of Cycling.

ADVANTAGE OF BICYCLING FOR NEW YORK CITY

In a city beset with the gargantuan problems of New York, the simple, unassuming bicycle: the most efficient form of urban transportation ever invented, can be a powerful solution. By making a genuine, comprehensive commitment to encouraging cycling, city government could underwrite a dramatic improvement in many of the conditions that now undermine New York City as a place to live and work: pollution, traffic congestion, noise, danger and the general aura of face lessness and hostility.



Bicycle commuters wait at a light in New York City. New York City is increasingly becoming a bike friendly city with dozens of new bicycle stores and miles of new bike paths that circle the city. As a result bicycle use is up 26 percent according to figures released yesterday by the City Department of Transportation.

Health Benefits

- Have better blood pressure, insulin levels, and triglyceride levels.
- Report greater feelings of freedom, relaxation, and excitement than car commuters.
- Believe their health has improved since they started commuting by bike.
- Have higher levels of well-being, self-confidence, and stress tolerance.
- Have reduced tiredness and less difficulty sleeping.



WHAT EVERYONE SHOULD KNOW ABOUT BIKE COMMUTING

Tip 1: Riding for transportation is real cycling.

If you're looking to become a stronger cyclist or get more fit – and who isn't? – biking to work will add real miles to your training log, helping to build fitness and lose weight. And if your commute is long enough to serve as your training ride, you've just added more free hours to your day.

Tip 2: “There’s no shower at work” is no excuse.

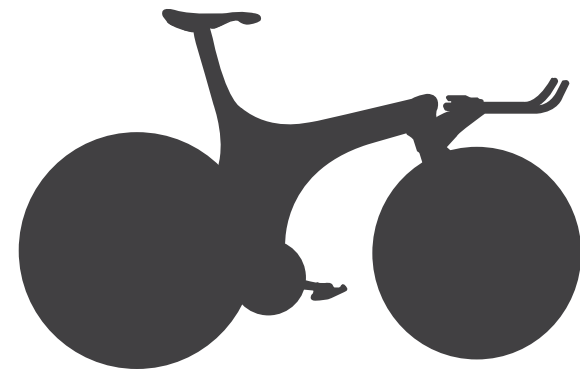
In a survey of hundreds of bike commuters in North America, Dave Glowacz, author of *Urban Bikers’ Tips and Tricks*, found that 85 percent don't bother to shower after reaching their destination. Change your clothes, and keep a stash of baby wipes in your desk drawer for quick clean-ups.

Tip 3: Any bike can be a commuter bike.

The best bike depends on the distance and terrain you cover, and whether or not you'll have to lock it outside. It could be the rusty mountain bike in your garage, your regular road bike or a dedicated commuter bike.

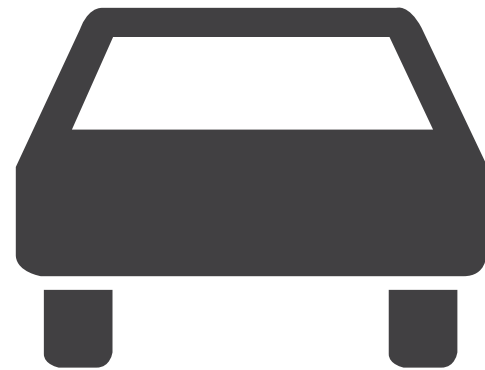
Tip 4: Ride like you drive.

Cyclists have the same rights and responsibilities as motorists, so follow all traffic laws, signal where you're going and ride predictably. Rural commutes aren't much different from recreational rides. In urban areas, traffic will be heavier, but also slower, so you may be able to take the whole lane.



Biking

The average annual operating expense of a bicycle is just \$308, versus more than \$8,000 for a car.



Driving

- A car that gets 12.5 miles per gallon requires the equivalent of seven dozen eggs to carry one person three miles.
- A person walking would require three eggs to go the same distance.
- A loaded bus requires the equivalent of two dozen eggs for each person it carries three miles.

Biking is the most energy efficient means of transportation.

- A bicyclist burns about 25 Calories per mile. One large egg supplies 80 Calories. A cyclist can travel about three miles on the energy of one egg.
- Even if you double the miles per gallon and double the occupancy a car will still use the equivalent of twenty-one eggs to make the trip: more than twenty times a bicycle.
- A train requires the equivalent of three dozen eggs for each person it carries three miles.

≡ Bike ≡ Safety ≡ and Rules.

BICYCLING IN NYC IS GOVERNED BY A SERIES OF LAWS

They are found in the State's Vehicle and Traffic Law. The links below can help you find more information about the laws and rules. Bicycles have the legal right to share the road on most public highways and bicyclists must comply with governing laws. Bicyclists can be ticketed for violations. In the case of children, parents or guardians may be held responsible for any fines.

Safe city cycling means knowing the rules of the road that apply to **CYCLISTS.**



CYCLISTS HAVE ALL THE RIGHTS AND ARE SUBJECT TO ALL OF THE DUTIES AND REGULATIONS APPLICABLE TO DRIVERS OF MOTOR VEHICLES

- **Stop at red lights and stop signs.** Obey all traffic signals, signs and pavement markings, and exercise due care to avoid colliding with pedestrians, motor vehicles or other cyclists.
- **Use a white headlight and a red taillight,** as well as a bell or horn and reflectors.
- **Ride with traffic,** not against it.
- **Ride in the street, not on the sidewalks** (unless rider is age 12 or younger and the bicycle's wheels are less than 26 inches in diameter).
- **Use marked bike lanes or paths when available,** except when making turns or when it is unsafe to do so.



LEFT

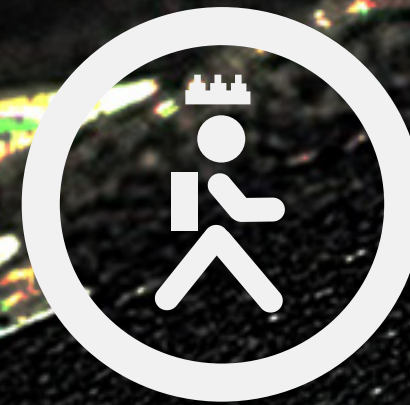


RIGHT



STOP

Biking Rules Street Code



PEDESTRIANS RULE

Pedestrians always have the right of way.



CLAIM A LANE

Claim space on the street, not the sidewalk.



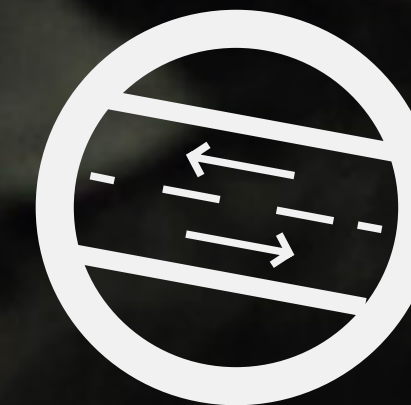
UNTANGLE INTERSECTIONS

Claim space on the street, not the sidewalk.



LIGHTEN UP

Don't be invisible. Front and rear lights are our eyes to the world at night and make us bigger and brighter on the street.



RIDE RIGHT

Ride in the direction of traffic. When we're on bicycles, we ARE traffic! And it is safer for everyone else on the street.



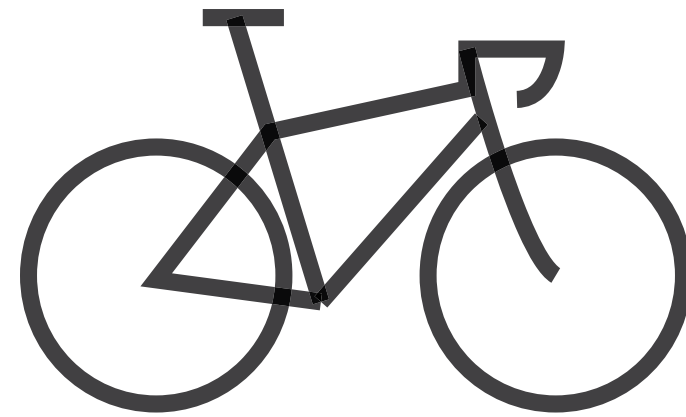
SOUND OUT

Having a bell lets people know we are approaching and it's fun to make some noise! Give your bike bling some ring.

≡ Bike ≡ Types.

WHAT'S YOUR PRIMARY RIDING STYLE?

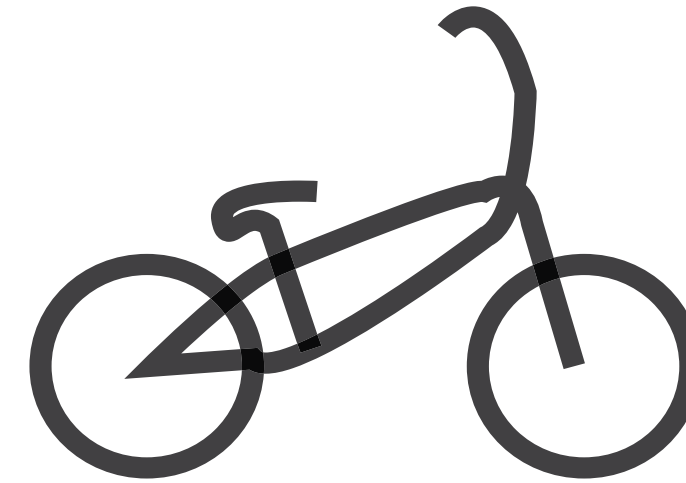
Your first consideration is to know where you'll be riding: on pavement, dirt trails or both. Some bicycles are made specifically for a particular kind of riding surface, while others are versatile enough that, perhaps with a quick tire change, they can be ridden in more than one category. To get you started, here is a general breakdown of the different kinds of bikes that REI carries. Within each of categories are individual models that emphasize performance, versatility or comfort.



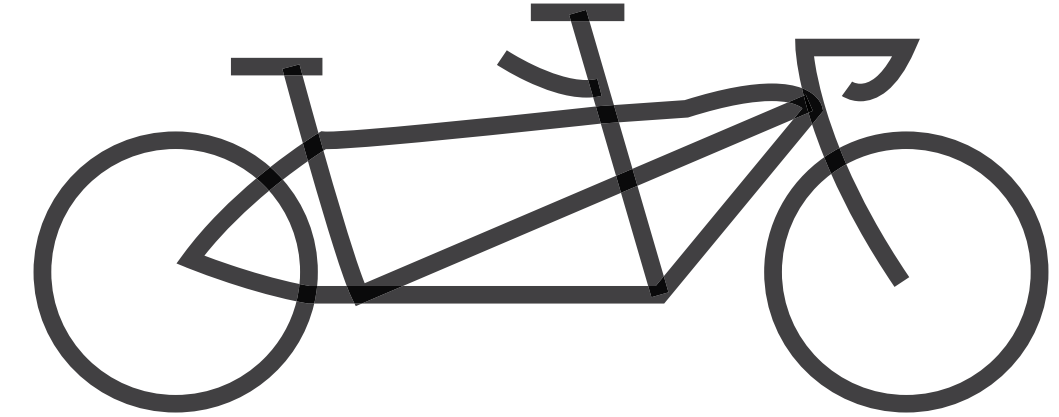
ROAD BIKE



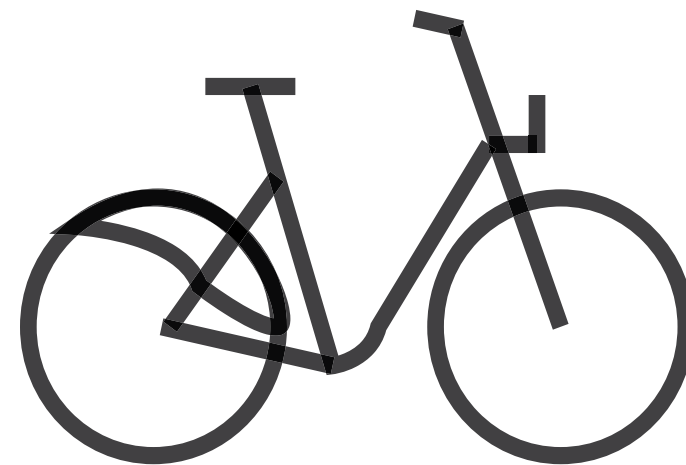
MOUNTAIN BIKE



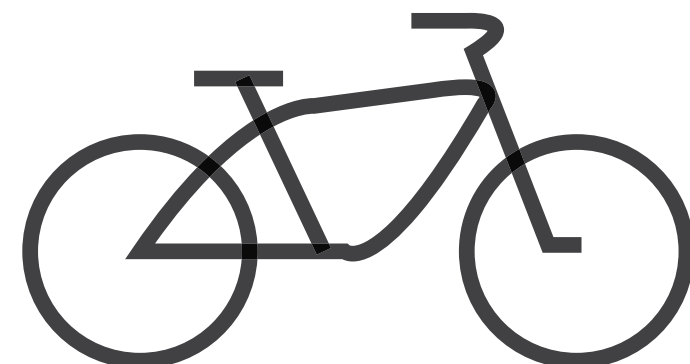
BMX BIKE



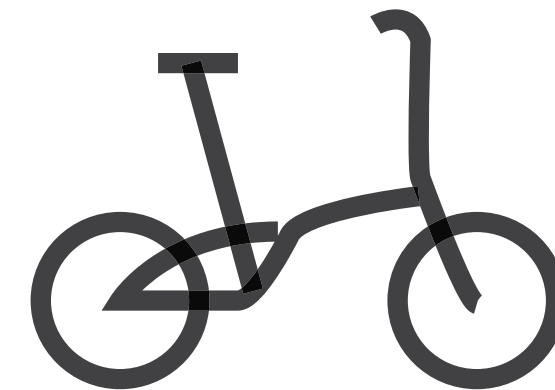
TANDEM BIKE



CITI BIKE



CRUISER BIKE



FOLDING BIKE



LIEGERAD BIKE

Road Bikes



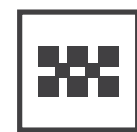
STREET



HIGHWAY



PARK



RACE



FIRST BIKE

BICYCLE BUILT FOR TRAVELING AT SPEED ON PAVED ROAD

Road bikes feature narrow tires, a short wheelbase, and a lightweight frame. They're not designed to be ridden on rugged, unpaved surfaces hence the name "road" bike. It is particularly important to make sure your road bike is fit properly, as a poor fit can lead to discomfort.



Best for: Pavement.

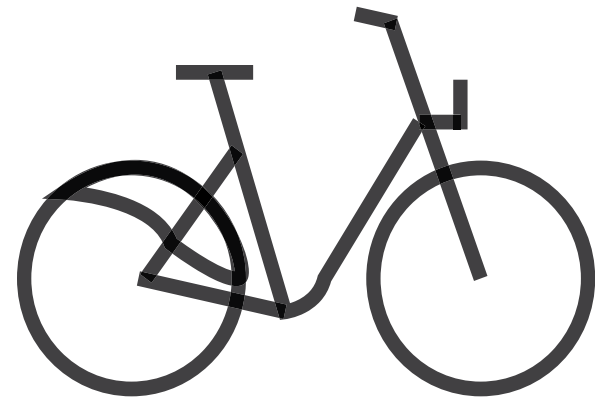
Description: Generally lighter in weight than the typical mountain or comfort bike, road bikes are good for multiple pavement uses including fitness riding, commuting, long-distance and event rides, touring and racing. They are suitable for riders ranging from novices to seasoned enthusiasts. Proper fit for most road bikes is particularly important, as a poor fit can be uncomfortable or even painful. In addition, a poorly fitting road bike can also reduce the efficiency of your pedaling. Some models are built for speed with a more aerodynamic riding

positioning, while others provide a more upright riding position. Road bikes may include racks, lighting systems or fenders for commuting or touring use. Prices range from \$500 to \$2,000+. Road bikes are distinguished by 2 basic handlebar styles:

Drop-bar handlebars are lightweight and aerodynamic and are a better choice if you want to go faster or are more concerned with efficiently transferring your energy into making the bike move forward. They also allow for a greater number of riding and hand positions than flat bars. Their more aerodynamic riding position may put more strain on your back if you are less flexible.

Flat-bar handlebars combine the efficiency of drop bar road bikes with a slightly more upright riding position. This allows you to sit up in a higher and more relaxed position so you can better see the road and potential hazards. An upright position also reduces strain on your hands, wrists and shoulders. This increased versatility comes with the tradeoff of being slightly less efficient than the typical drop-bar road bike.

Citi Bikes



STREET



PARK



FIRST BIKE

PUBLIC BICYCLE SHARING SYSTEM THAT SERVES PARTS OF NEW YORK CITY

It is the largest bike sharing program opened to the public in May 2013 with 330 stations with 6,000 bikes.

A convenient solution for quick trips around NYC.

The Citi BikeSM system, operated by NYC Bike Share features thousands of bikes at hundreds of stations around New York. Citi Bikes are available 24/7, 365 days a year. Station locations are based on population and transit needs, and were selected through a participatory public input process. Each station has a map

of the service area and surrounding neighborhood, and a docking system that releases bikes for rental with a card or key. Riding a bike in New York City has never been better. With more than 700 miles of bike lanes citywide, including parks, greenways and on-street facilities.



HOW IT WORKS?

1. UNLOCK FROM ANY STATION

Get Started: Purchase a 24-Hour or a 7-Day Access Pass. A \$101 security hold will be placed on your card for every pass you purchase. Frequent rider? Join Citi Bike by signing up for an Annual Membership!

Unlock a Bike: 24-Hour and 7-Day Pass holders are provided with a ride code. Type the code into the key pad on a dock with an available bike. Annual Members simply dip their own unique key into the key slot at any dock with an available bike.

Adjust for Fit: Citi Bike seats are adjustable to fit a wide range of rider heights. Throw your bags into the front basket, strap it down, and you're ready to go!

2. RIDE WHEREVER YOU WANT

Keep an Eye on the Clock: 24-Hour and 7 Day Access Pass holders may ride for 30 minutes without incurring any overtime fees. Annual Members have 45 minutes to ride before incurring overtime fees.

Unlimited Rides: Ride as many times as you want during your Access Pass or Annual Membership period. Keep pedaling!

Subsequent Rides: 24 Hour and 7 Day Access Pass holders must request a new ride code to unlock another bike. Just swipe your card at the kiosk and a new code will be generated for you automatically. Annual Members just dip their key to ride again!

3. RETURN TO ANY STATION

Choose From 330 Locations: Find locations using a station map or download the Citi Bike App.

Re-dock: Firmly push the bike into the dock and wait to see a green light blink on the dock to confirm it's been properly locked.

Station Full?: Select "Request Time Credit" on the start screen of the kiosk. You will have 15 minutes added to your time at no charge to find a nearby station with available docks.

Mountain Bikes



PARK



FOREST



PUMP



RACE



STRUCTURE

A BICYCLE CREATED FOR OFF-ROAD

Mountain bikes are typically ridden on single track trails, fire roads, logging roads, and other unpaved environments. These types of terrain commonly include rocks, washouts, ruts, loose sand, loose gravel, roots, and steep grades. Mountain bikes are built to handle this terrain and the obstacles that are found in it like logs, vertical drop offs.

Best for: Dirt or rocky trails and gravel roads; OK for pavement too (with tire change).

Description: Designed with shock-absorbing features and better braking systems, mountain bikes can handle dirt trails and the rocks, roots, bumps and ruts that come with them. They feature lower gears than most road bikes to better handle steeper terrain. Higher-priced models tend to be lighter weight as well. Mountain bikes can be a good choice for commuting because they can withstand potholes while still providing comfort. The smaller diameter wheel (26 inch) of traditional mountain bikes is less efficient on pavement than the larger diameter wheel (700 millimeter/27 inch) of a road bike. To address this, many mountain bikes are now designed for 29 inch wheels (see the REI Expert Advice article, The Basics of 29er Mountain Bikes). These larger diameter wheels and tires provide decreased rolling resistance and more easily roll over obstacles, at the cost of some agility.

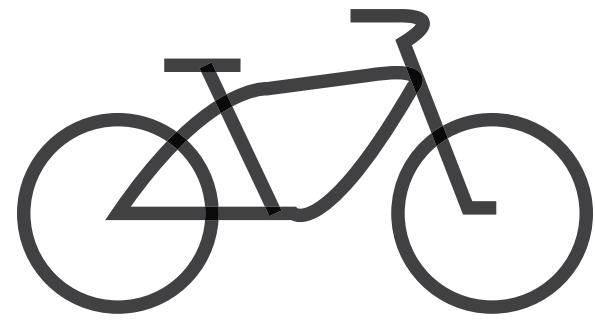
Mountain bikes come in 2 basic varieties:

Hardtail bikes feature a front suspension fork and a rigid back with no rear suspension shocks. This type of mountain bike is much less expensive and lighter in weight than a typical full-suspension mountain bike. A hardtail is the more versatile choice if you plan to use it for both paved and unpaved surfaces. The tradeoffs from a full-suspension mountain bike? A hardtail is less able to safely handle more technical singletrack trails, provides less overall shock absorption and, in some situations, delivers less rear wheel traction.

Full-suspension bikes have both front and rear suspension shocks making them ideal for backcountry trails or technical singletrack. They also stand up to more aggressive riding including jumps or drops of up to 5 feet. Full suspension bikes are more expensive and generally heavier than hardtail bikes.



Cruiser Bikes



STREET



PARK



FIRST BIKE

POPULAR AMONG CASUAL BICYCLISTS AND VACATIONERS

They are very stable and easy to ride, but their heavy weight and balloon tires tend to make them rather slow. They are associated with the larger category of hybrid bicycles.



CRUISER BIKES TODAY

Cruisers' comfort, style, and affordability (compared to mountain and racing bikes) have led to renewed popularity in recent years.

In the early to mid-1990s, Schwinn produced a series of cruiser models, including the "Cruiser Deluxe" (which featured a Phantom-style tank with horn, chrome fenders, white-wall balloon tires, rear rack, a springer fork, and two-tone blue or green frames).

The cruiser resurgence continued in 1995, when Schwinn reissued the Black Phantom to celebrate the company's 100th birthday. During that same time frame, similar offerings appeared from Columbia (a limited reissue of the classic 1950's 5-Star was produced in the early 1990s), and Roadmaster. Harley Davidson even licensed a cruiser bike with their logo and trademark styling. These helped stir up interest in cruisers, which brought them to the attention of aging Baby Boomers, who remembered the originals from their youth and now were reaching an age where a comfortable bike was more exciting than a fast bike, and who also had the money to buy whatever they wanted. The classic "retro" looks, reliable mechanical performance, comfortable ride, and relatively low price of cruisers (compared to mountain bikes or road racers) also appealed to young Gen Xers.

Nearly every major bike manufacturer now offers at least one cruiser model, if not an entire line. Some notable contemporary manufactures include Electra Bicycle Company and Felt Bicycles. Cruiser sales have continued to rise over the past decade and today many towns have clubs sponsoring regular cruiser rides.

Best for: Pavement or some gravel roads.

Description: Designed with city streets in mind, urban bikes are rugged and sturdy with tough frames and strong wheels. They feature an upright riding position that allows you to better see, and be seen by, motorists. Many commuter-friendly models include racks, lighting systems or fenders.

These bikes which can be road, mountain, comfort or hybrid bikes : feature frame geometries, handlebars and wider saddles that are tailored to better fit the typical female body proportion. For instance, the top tube frame lengths on women's bikes are generally about 1 to 3 centimeters shorter than men's bikes, so the reach (saddle to handlebar) is shorter and fits most women better. These bikes also feature shorter-reach shifters that better fit women's hands. Prices range from about \$500 to \$1,500.

BMX Bikes



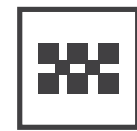
STREET



STRUCTURE



PUMP



RACE



FOREST



FIRST BIKE

THE BEST EVOLUTION OF THE CYCLING FORM

Unlike just riding to get from point A to point B, BMX involves what ever you feel like adding. See a good drive way curb and bust out some air.



CONSTRUCTION

Though originally denoting a bicycle intended for BMX Racing, the term “BMX bike” is now used to encompass race bikes, as well as those used for the dirt, vert, park, street, flatland and BMX freestyle disciplines of BMX. BMX frames are made of various types of steel, and (largely in the racing category) aluminum. Cheaper, low end bikes are usually made of steel. High range bikes are mostly chromoly or high tensile steel, although the latter is noticeably heavier with respect to strength.

The introduction and widespread popularity of the cassette hub has ushered in the use of smaller gearing on BMX bikes. Instead of the old 44/16 gearing found on almost all older BMX bikes, new bikes use gearing such as 36/13, 33/12, 30/11, 28/10, 25/9, 23/8, and even 22/8, all of which have similar gear ratios of almost 2.8:1. Advantages of smaller gearing hubs include lighter weight, and more clearance when grinding. The freewheel hub is all but extinct due to several factors. The smallest freewheels that can be made is with 8 teeth, which is smaller than most riders prefer. Also, they are less consistent than cassette hubs, and skip or jam up far more frequently.



Most freestyle, street, and park BMX bikes, the wheels have 36 spokes. Race bike wheels are also usually 36 spokes, but wheels for the smallest racers, sometimes as young as three years old, can be built with 18 or 28 spokes. More aggressive riders may opt for wheels with a spoke count of up to 48 spokes.

BMX RIDING STYLE

BMX Freestyle Riding: Flatland and vert riding are the two basic types of BMX freestyle riding. Flatland riders perform tricks while riding on streets and other level pavements, while vert riders perform tricks on ramps, half-pipes, blocks, and other types of obstacles.

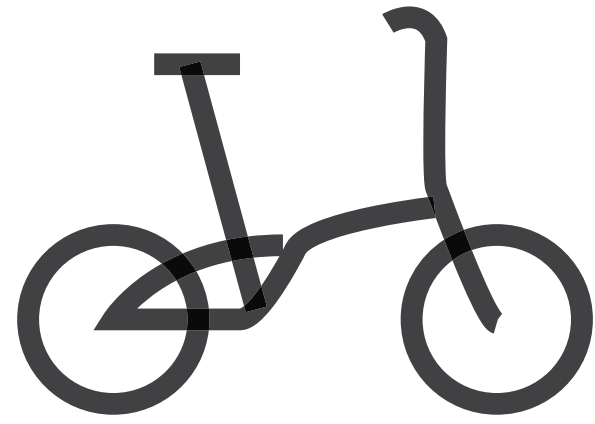
BMX Dirt Jumping: BMX dirt jumpers perform various stunts, such as huge jumps, flips, and twists after launching off very tall and steep mounds of dirt.

BMX Racing: Conventional BMX racing involves BMX riders racing against each other on a dirt track, which has a variety of dirt jumps and other dirt features.

BMX Overlap: Overlap combines freestyle riding and dirt jumping. In overlap, dirt jumping tricks are often performed on freestyle ramps, and freestyle tricks are often performed on dirt jumping ramps.

BMX Cruiser: Cruiser riding is the last style to gain popularity. BMX cruising involves riding BMX bikes on bike paths or other scenic, usually paved, routes. Most people who participate in BMX cruising are casual cyclists, and they mostly tend to be older than other BMX riders.

Folding Bikes



STREET



PARK



FIRST BIKE



HIGHWAY



TRANSPORT

PERFECT FOR THE SPACE CHALLENGED URBAN COMMUTER

When folded, the bikes can be more easily carried into buildings and work places or on public transportation, and more easily stored in compact living quarters or aboard a car, or plane.



WHAT ARE THE BENEFIT?

Convenience: A bike that can pack down small can come with you anywhere on the bus or train, in the car, on holiday maximising your ability to snatch precious cycling opportunities. Also, folding bikes are ideal for flat dwellers, where space is at a premium. Also, even in a large house, the ability to stow your bike in the under stairs cupboard allows you to keep it safe, warm, dry, and ready to go at a moment's notice.

Security: Thoughts of your bike disappearing from the cycle rack are a thing of the past when you've got a folding bike, because in most instances, you can take your bike with you. Most compact folding bikes are small enough to sit unobtrusively under your desk at work. Another security point is that folders are a niche product that most thieves won't touch.

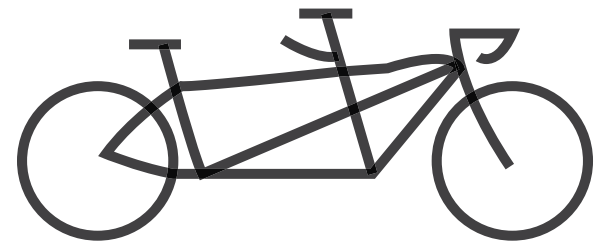
Multi Modal : A folding bike will allow you to combine cycling with other forms of transport like trains, allowing you to make quick, independent, door-to-door journeys faster than you ever thought possible. Imagine being able to easily hop on buses and trains in far flung locations, extending your range of travel way beyond your normal capabilities. Cycle touring purists may scoff.

Environment: A folding bike is more convenient than any other type. This means that you'll use it more and find more opportunities to replace carbon heavy journeys. Leisure cyclists can benefit too. If you are using a car to get to your destination, it is far more economical to stow your bikes in the car rather than on a roof rack or rear mounted cycle rack. Check the difference in your fuel consumption next time.

“The Folding Bike Goes Cool. Once the pocket protector of the cycling world, these adaptable rides have evolved into a stylish mode of transport.”
-The Wall Street Journal



Tandem Bikes



STREET



PARK



TOURISM

BICYCLE BUILT FOR TWO

The tandem bicycle or twin is a form of bicycle (occasionally, a tricycle) designed to be ridden by more than one person. The term tandem refers to the seating arrangement (fore to aft, not side by side), not the number of riders. A bike with two riders side by side is called a sociable.

Why Ride A Tandem?

Riding a normal, single-rider bicycle is a very rewarding experience, but a tandem bicycle adds a whole new dimension to cycling. Different tandemists choose the long bike for different reasons:

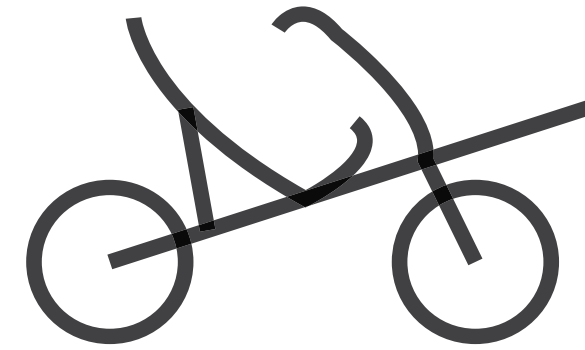
- A tandem turns the basically solitary, individualistic activity of cycling into an mutual experience that may be shared by a couple.
- A tandem allows handicapped people who couldn't otherwise ride a bicycle to share in the joy of cycling.
- A tandem can allow a parent to share cycling at an adult level of speed and distance with a child.
- A tandem is the ultimate rush for cyclists who enjoy the sensation of high-speed cycling.



“Two Wheels + Two Seats = Love”

-The New York Times

Liegerad Bikes



STREET



HIGHWAY



TOURISM

THE RIDER IN A LAID BACK RECLINING POSITION

Liegerad riders choose this type of design for ergonomic reasons; the rider's weight is distributed comfortably over a larger area, supported by back and buttocks.



Liegerad bicycle?

On a traditional upright bicycle, the body weight rests entirely on a small portion of the sitting bones, the feet, and the hands. Most liegerad models also have an aerodynamic advantage; the reclined, legs forward

position of the rider's body presents a smaller frontal profile. Liegerads are available in a wide range of configurations, including: long to short wheelbase; large, small, or a mix of wheel sizes; overseat, underseat.

NYC Bike Shops.

BEST BIKE SHOPS IN NYC

From high-end racers to ladylike cruisers, we've tracked down the spots to score bikes of all styles (and prices).



Adeline Adeline

You'll have to tie a scarf around your neck or hold a bouquet under your arm to feel at home on one of the lovely specimens stocked by this bicycle boutique. Case in point: the elegant commuter bikes by British brand Pashley (\$995-\$1,750), handmade in Shakespeare's hometown of Stratford-upon-Avon for added poetic appeal (as if the swooping lines of the frames and baskets weren't enough). Linus bikes are ideal for beginners, comparatively inexpensive with sturdy frames in bold colors like brick red and navy (\$449-\$849). Bikes can go up to nearly \$3,000. Beauty is pain (for your wallet, at least). You won't find spandex shorts at this Tribeca bicycle shop, where owner Julie Hirschfeld offers a fashionable selection of European two-wheelers and snazzy

accessories. The store allows shoppers to test ride bikes at nearby Washington Market Park or along the West Side Greenway path. We're aching for a spin on one of the Pashley Princess Sovereign cycles (\$1,295), which are built in the U.K. town Stratford-upon-Avon and come with wicker baskets, perfect for schlepping Saturday Greenmarket goodies.

147 Reade Street
New York, NY 10013
(212) 227 1150
www.adelineadeline.com
Tue to Sun: 11am to 6:30pm



Toga bike shop

While this 40-plus-year-old business carries all manner of bicycles, it's the road racers and hybrids that are the most popular. Visit the 3,500-square-foot Upper West Side location (Toga Bike Shop; Gotham is the downtown location) for a vast selection, including models like Giant Defy 5 (starting at \$700) and Specialized Tarmac (\$2,100 and up). The knowledgeable staff aren't paid on commission, so you can be sure they're not foisting a more expensive model on you for personal gain, and every new purchase comes with a lifetime of free repairs.

New York's oldest and largest bike shops. We are happy to have served cyclists in NYC since 1967. Our sales and mechanical staff have a reputation for quality, professionalism and expertise. That's why we were voted one of the top 100 bicycle stores in the U.S. Voted best bike store in New York We have stores in TriBeCa.

Toga has a wide selection of mountain, road, triathlon, and hybrid bicycles at all price levels, a tremendous assortment of the latest, high-tech accessories and the largest bicycle clothing department in New York City & Rockland County. Toga is the bike shop in New York City. Toga also has a large triathlon-specific department, with accessories, wetsuits, and much more. Plan a visit to see our beautiful, renovated store.

110 West End Avenue
New York, NY 10023
(212) 799 9625
www.togabikes.com
Mon to Fri: 11am to 6:30pm
Sat: 10am to 6pm
Sun: 11am to 6pm



718 Cyclery

If you'd like to design your dream bike from handlebars to wheels (and even help put it together), this Park Slope workshop will meet your needs. First, sit down with owner Joe Nocella and sketch out your vision. He'll draw up several options (with frames from Surly, Mission, Leader and more), which you'll share in a Google Doc, before narrowing it down to the final design. Once the parts arrive, you're encouraged to put some elbow grease into your ride alongside the shop's mechanics. A single speed starts at around \$900, but the personalized bike is promised to last for years to come. Plus, with free open-to-the-public weekly classes (Thursdays at 7pm) on fixing flats, adjusting brakes and more advanced skills, you may never have to pay for a repair again.

718 Cyclery is founded on the principle that we are practitioners of 100+ year old technology, not the guardians of it. We strive to create an environment where arrogance and attitude have no place. These are bikes, and this better be fun.

254 3rd Avenue
Brooklyn, NY 11215
(347) 457 5760
www.718c.com
Mon to Fri: 9am to 9pm
Sat to Sun: 9am to 6pm



Red Lantern Bicycles

Both bike and beer lovers will enjoy this hybrid shop, café and bar. A liquor license means customers can sip on PBR (\$3), Founders Centennial IPA, Coney Island Mermaid Pilsner and Sixpoint Sweet Action (\$5 each) while admiring the shop's mural of a crimson lantern held aloft by a flame-haired woman. If you're riding after your visit, grab a coffee (\$2.50) made from beans roasted in-house and nosh on a small selection of snacks such as croissants (\$2.50) and muffins (\$2.75).

On the other side of a partition made from old bicycle wheels, peruse a selection of new bikes from brands such as Torker, Xtracycle Radish and Surly (\$396–\$1,749), converted old-school ten-speeds (\$300–\$500) and custom-built rides (\$400–\$900). DIY enthusiasts can take bike-repair classes on Sunday evenings from 7 to 9pm—the first and fifth Sundays of the month focus on general maintenance for beginners (\$25), the second on brakes and gears (\$40), the third on bearings (\$40), and the fourth on wheel truing (\$40). The bikes we



carry are for the commuter and are designed to be used as a utilitarian machine. All of them are tough, rugged, and capable of racks and fenders. We specialize in useful and functional bicycles. We know that because of what we do to your ride, your livelihood will improve. We know that our bikes are making other people's lives better.

The staff has over 30 years of combined experience. We could tell you that we are the best. But every shop does that. What we will tell you is that what we do is done precisely and accurately. Check out the "Service" section for more in-depth details. And when you do come in, our work will be the proof behind the puddin'.

345 Myrtle Avenue
Brooklyn, NY 11215
(347) 889 5338
www.redlanternbicycles.com
Daily: 7am to 11pm



NYC Bike Map.

5.5 MILLION JOURNEYS AT NYC BIKE SHARE

Based on origin-destination data released by NYC bike Share for journeys between July 2013 and February 2014. Idealised route assumed, using OpenStreetMap data.



Data released by NYC bike Share

If you look carefully at the full size map you can see a thin line heading north-eastwards, initially well out of the bikeshare “zone”, representing journeys between Williamsburg and Central Park, via the Queensboro Bridge cycle path. We see a similar phenomenon for journeys between Tower Bridge and Island Gardens in London. Whether any of the riders actually take this route, of course, is open to question – they might take a longer, but more familiar route, that stays more with in the area of the bikeshare.

This is a version of the graphic with the data split into four timeperiods – weekday rush-hour peaks (7-10am and 4-7pm starts), weekday interpeak (10am-4pm), weekday nights (7pm-7am) and finally weekends. The data is scaled so that the same thicknesses of lines across the four maps represent the same number of journeys along each street segment – but bear in mind that there are fewer weekends than weekdays. While, as would be expected, the rush-hour peaks see the most number of journeys, there is less spatial variation across the city, between the four timeperiods.

The graphics were produced by creating idealised routes (near-shortest path, but weighted towards dedicated cycle routes and quieter roads) between every pair of the ~330 docking stations in the system, using Routino and OpenStreetMap data (extracted using the Overpass API). Edge weights were then built up using a Python script, a WKT was created and then mapped in QGIS, with data-based stroke widths applied from the weights.

MANHATTAN GREENWAY BIKE MAP

There are three principal parts of the Manhattan Waterfront Greenway.

1. Hudson River Greenway is the longest, running along the West Side, from Dyckman Street in the north to Battery Park in the south, mostly through Hudson River Park and Riverside Park, with a small gap in West Harlem where users must use streets. This is the most heavily used bikeway in the United States. Most is near Hudson River water level, except the portion north of George Washington Bridge where it climbs to approximately 160 feet (50 meters) and includes Inspiration Point.
2. East River Greenway runs along the East Side from The Battery and past South Street Seaport to East Harlem with a 2.5 mile (4 km) gap from 34th to 83rd streets in Midtown where cyclists use bike lanes in busy streets to get around United Nations Headquarters. Intermediate access points at 63rd Street and elsewhere are suitable to walking but not bicycling.
3. Harlem River Greenway is the shortest, and is completely uninterrupted, running northward from 155th Street at the north end of Central Harlem to Dyckman Street in northern Manhattan. A bike lane in Dyckman Street connects across Inwood to Inwood Hill Park and the Hudson River Greenway.

NORTH AND SOUTH COUNTRY TRAILWAYS BIKE MAP

To skip the city miles getting there, you can take Metro North to the trail.

Westchester County, New York City's neighbor to the North, is home to the North County & South County trailways. These Westchester trails are part of an ambitious rails-to-trails project that will eventually connect Van Cortlandt Park in the Bronx to Putnam County Trailway via a scenic car-free bike path through Westchester County. More than 40 miles have already been completed & are ready for riding.

There is on-going construction along the South County Trailway and detours are sometimes required, but it is possible to ride from the Bronx to Carmel in Putnam County with only a minimal amount of on-street cycling.

NYC Bike Events.

TD FIVE BORO BIKE TOUR

The TD Five Boro Bike Tour Presented by REI offers 32,000 cyclists the opportunity to bike through all five boroughs: Manhattan, The Bronx, Queens, Brooklyn, and Staten Island on streets totally free of traffic. The event is co-produced by Bike New York and the New York City Department of Transportation.



Rules

To ensure a smooth ride, please be aware of and follow these rules and security measures. Thanks in advance for your cooperation!

1. You must wear a helmet to ride in the Tour. No ifs, ands, or buts about it. Safety first.
2. You must have the full Rider Identification Kit (helmet cover, bib, and bike plate) to ride in the Tour and avail yourself of all Tour services. No ifs, you get the idea.
3. Be sure your bib and bike plate are visible. Marathon Foto will use the numbers on each to match you up to photos they'll be taking throughout the Tour. Afterward, riders will be able to view and purchase these photos online.
4. Complete the emergency information label on the back of your bib and that of any children you are escorting.
5. Carry photo identification (children excluded) and keep it handy; you may be asked to show it.
6. The Tour is for human-powered cyclists only. Skateboarders, rollerbladers, e-bikers, etc. may not participate.
7. There must be one adult for every one child.
8. Children younger than 3 years old may not participate.
9. Youth ages 3 to 9 must ride on a tandem bike, tag along bike, or in a bike trailer.
10. Youth ages 10 to 13 can ride their own bicycles, but must remain in close proximity to their adult guardian.
11. Youth ages 14-17 can ride their own bicycles, but must be linked to a registered adult riding in the Tour.
12. Backpacks, hydration packs, panniers, and bags larger than 420 cubic inches are not allowed in the Tour. And, Ride with the flow of the Tour.

TOUR GUIDE DESCRIPTION

The 40-mile, traffic-free Tour begins in Lower Manhattan, heads north through the heart of Central Park and continues on to Harlem and the Bronx before returning south along the East River on the FDR Drive. From there, cyclists cross into Queens and then Brooklyn, where riders take over the Brooklyn-Queens Expressway before the breath-taking climb up and thrilling ride down the Verrazano-Narrows Bridge into Staten Island.

As if the excitement of a traffic-free ride through New York City was not enough, a lively Finish Festival awaits riders when they arrive at Fort Wadsworth in Staten Island. Giveaways, a food concession, product samples, musical entertainment, massages, many photo booth, and official merchandise on sale will keep the celebration going. And then, of course, there's always the after-party.



Details

1. 40 miles
2. Enters all five boroughs: Manhattan, the Bronx, Queens, Brooklyn, and Staten Island
3. 5 bridge crossings: Madison Avenue Bridge, Third Avenue Bridge, Queensboro Bridge, Pulaski Bridge, and the Verrazano-Narrows Bridge. (The Tour offers the only opportunity to cycle across the Verrazano.)
4. Zero traffic. It's a beautiful thing.

Rest areas

1. FDR Park
2. Astoria Park
3. Con Edison Learning Center
4. Brooklyn Bridge Park
5. Fort Wadsworth (Finish Festival)

Replenish your energy at four rest areas along the route (plus the Finish Festival in Staten Island). Complimentary snacks at each stop include Del Monte bananas,

water, and kind bars. Signs and Marshals along the route will direct you to rest areas or to bypass lanes. All cyclists near the head of the Tour will be held here for about 20 minutes while the NYPD ensures that the remainder of the route is devoid of traffic. Cyclists near the tail of the Tour will be directed to a mandatory shortcut that bypasses this stop and leads to the next one.

Shortcuts

Riders in the rear of the Tour may be directed to a shortened route that bypasses the Astoria Park rest area and leads directly to the Con Ed Learning Center rest area,

a shortcut of 4 miles. Due to the street closure schedule, all riders must be on the Brooklyn-Queens Expressway (BQE) by 2:10PM, otherwise, your Tour will end in Brooklyn at approximately mile 27.5. Please be mindful of your time spent in the rest areas.

Leaving the Tour

If you need to leave the Tour for any reason, we recommend doing so at the following locations and by the following modes of transportation. Note: If you leave the Tour, you will be riding on open roads and will have to watch for cars and road hazards.

Recycling

All rest areas will have designated recycling receptacles. Please avail yourself of these and help Bike New York in our efforts to secure sustainability certification from the Council for Responsible Sport. Learn more about our green goals here.

Bike Repair

If your bike needs maintenance, stop at a repair tent. Labor is free, but there is a charge for parts. Be sure to bring a spare tube. Flat tires are the most common problem, and marshals are more likely to be able to help you if you have a tube.

Lost and Found

Check at Information Tents for items lost along the way. After May 4th, call 212-870-2080 or email info@bikeneewyorkcity.org in case your lost items were brought to the Tour office.

Marshals and NYPD

Volunteers will be riding with you and/or stationed along the route providing directions to keep the Tour running safely and smoothly. Rider Assist Marshals ride in yellow vests alongside Tour participants. They help participants with flat tires and minor bike repair, assist with the flow of the Tour, and provide information and encouragement. Course Marshals are stationed along the route in orange vests. They give route directions and alert you to road conditions ahead. New York Police Department officers are also on the route to manage car traffic. Please follow all instructions given by Marshals and NYPD officers.

Medical

Emergency medical technicians and paramedics from the Jamaica Hospital Medical Center Medical Bike Unit are available to attend to medical needs, as are ambulances from the Fire Department of New York's Emergency Medical Service. Ask any Tour Marshal or police officer to get you medical assistance.

Toilets

Hundreds of toilets are available throughout the Tour, at all rest areas, water stations, and the Finish Festival.

TD FIVE BORO BIKE TOUR EDUCATION

Bike New York holds free year round classes, empowering novice cyclists with skills and state of the art information. Our on bike classes operate out of satellite Bicycle Education Centers around the City. Each center is equipped with a fleet of bicycles as well as helmets and other equipment.

In addition to free weekend classes, Bike New York offers free school assemblies and after-school programs during the academic year as well as a free summer program to youth enrolled in organized camp groups. Since 2011, Bike NYC's Education Programs have reached more than 17,500 New Yorkers with free classes.



A list of the classes offered by NYC

Bike Bonanzas feature free, fun activities like a Learn to Ride class, free helmets for kids and adults, bike registration, and a kid's bike swap.

Learn to Ride — Kids is a free group class for children who are ready to ditch their training wheels and ride a two-wheeler for the first time. Through a safe, easy, effective method, Bike New York's experienced instructors help kids learn to balance, pedal, start, stop, and steer a bicycle. Most kids get it in one session, but even if they don't, parents leave knowing an easy, crash-free, low stress technique that will have their kids riding independently in a short amount of time.

Thinking of joining Citi Bike, New York City's new bike share system? Attend a Citi Bike Street Skills class for a short session that includes bike share basics, like pricing and station locations, as well as essential street riding tips. Every participant will leave with a free 24-hour pass to Citi Bike, worth \$9.95!

Básicos de ciclismo es un curso de 3 horas completamente gratis para adultos y adolescentes mayores de 14 años que recién aprendieron a montar bicicleta o que quieren mejorar sus habilidades básicas, tales como manejar en una línea recta o utilizar los cambios para pedalear eficientemente. Básicos de ciclismo prepara al estudiante para una experiencia de control y por lo tanto le permite convertirse en un ciclista seguro de sí mismo.

Winter Riding 101 is a free evening class that offers tips and tricks to help you extend your cycling season whether for a few weeks in the fall or straight through the entire winter.

Bicycling Basics is a free, 3-hour class for adults and teens who recently learned how to ride a bike or who want to improve their core cycling skills. From riding in a straight line to shifting gears for efficient pedaling.

How to Buy a Bicycle is a free one-hour session that's chock-full of information to help you navigate the bike buying process. From steel frames to knobby tires to disc brakes, How to Buy a Bicycle explains what's what at a bike shop and helps to simplify what might seem like an overwhelming decision. Before you make an investment, attend How to Buy a Bicycle.

Learn to Ride for Adults is a free, 2-hour class for adults and teens who are ready to ride! Through a safe, easy, effective method, Learn to Ride students learn how to balance, pedal, start, stop, and steer a bike as well as adjust a helmet for proper fit. Most people learn to ride their bikes while taking the class, but even if they don't, they leave with an easy, crash-free, and low stress way to teach themselves to ride.

Savvy Cyclist: Traffic Skills 101 is a comprehensive, full-day program for adults and teens who want to improve their street riding skills and increase their cycling knowledge. This class is ideal for cyclists who want to build upon the basics, those returning to cycling from a long hiatus, people who want to be more independent on their bike, and those who feel a little nervous while cycling in traffic.

Bike Commuting 101 is an inspiring one hour presentation covering the many benefits of bike commuting. While no riding is involved, the class provides oodles of information on ways you can make your bike commute more comfortable, more efficient, and safer. And give aways! No pre-registration is required for this free class.

Do you know how to fix the most common bicycle breakdown in 5 minutes or less? What two procedures will make your bike ride more easily and smoothly? Bring your bike to a half-day Bike Maintenance 101 class to learn these things and lots more.

Summary, Citation.

ABOUT NY RIDER

America may be a nation obsessed with automobiles, but today the bicycle is giving the car a run for its money. And while New York City is just one of many cities that is implementing new bike friendly policies, the local cyclist population stands out as one of the most diverse, and stylish in the world.

I trolled the streets of the city for particularly chic cyclists and snapped their portraits next to their wheels. Nearly 30 of those portraits are featured in my NY Rider book, reminding us that bikes are not just modes of transportation, but creative expressions of self. The book also shows that biking culture is as diverse as the city itself. And the closeups of the bikes themselves; chains, handle bars, and their sculptural beauty.

Whether they are pedaling to work or play, racing with a club, or out for a lazy ride, NY Rider pays photographic tribute to New York City in love with biking in all its forms.



Citation

<http://citibikenyc.com>

<http://www.nycbikemaps.com>

<http://velojoy.com>

http://en.wikipedia.org/wiki/List_of_bicycle_types

<http://www.wikihow.com/Choose-a-Bicycle>

<http://www.bikenewyork.org>

<http://www.nyc.gov/html/dot/html/bicyclists/bikemaps.html>

<http://www.timeout.com/newyork/shopping/best-bike-shops-in-new-york-city> sports gear-clothing

<http://newyork.cbslocal.com/top-lists/best-cycling-shops-in-new-york/>

http://en.wikipedia.org/wiki/Cycling_in_New_York_City

<http://www.roadtrafficsigns.com/bike-signs>

<http://www.nycbikemaps.com/nyc-bike-shops-stores/>

<http://www.dailymail.co.uk/news/article-2098261/Wright-brothers-bicycle-shop-site-torn-down.html>

<http://theboweryboys.blogspot.com/2012/11/bicycle-mania-story-of-new-york-on-two.html>

<http://www.pedalinghistory.com/PHhistory.html>

<http://www.ibike.org/library/history-timeline.htm>

<http://www.bicycling.com/news/advocacy/crackdown-cyclists-history-repeats-itself>

<http://bikingrules.org>

<http://bicyclehabitat.com/articles/nycbiking-rules-of-the-road-pg213.htm>

DES 619-01, Spring 2014
Typography II
Prof. Tom Dolle
Hyochin Kim