BikeNYC 2020
What New York Needs to be a World-Class Bicycling City
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Transportation Alternatives (TransAlt) is New York City’s leading advocate for better bicycling, walking, and public transit. With over 160,000 supporters and a committee of activists working locally in every borough, TransAlt fights for the installation of infrastructure improvements that reduce speeding and traffic crashes, save lives, and improve everyday transportation for all New Yorkers.

Since its founding in 1973, TransAlt has paved the way for remarkable changes to New York City’s streetscape.

Learn more at transalt.org.

Letter from the Executive Director

In 1993, Transportation Alternatives sparked a firestorm of city planning initiatives with the publication of The Bicycle Blueprint: A Plan to Bring Bicycling into the Mainstream in New York City. It was an encyclopedic guide to the step-by-step changes needed to initiate a wholesale embrace of bicycling in New York City, touching on everything from bridges to bicycle theft.

In the more than two decades since that report was published, much of our cityscape has changed. Bicycling infrastructure that once seemed far too radical for New York City is now commonplace. Our bike lane network has grown to over 1,000 miles, and by the end of 2017, more than 80 miles of that network will be on-street protected bike lanes. It is now possible to ride a bicycle from Downtown Brooklyn to the South Bronx entirely on protected bike lanes. Citi Bike, the public bikeshare program, has tallied more than 43 million rides, and reclaimed hundreds of low-turnover car parking spaces for bicyclists’ use.

The effect of this infrastructure is potent: one-quarter of adult New Yorkers – 1.6 million people – have ridden a bicycle at least once in the past year; 778,000 ride regularly. Bicycling has been embraced by New Yorkers as a healthy, environmentally-friendly, and efficient mode of transportation that should be encouraged, not stigmatized. Persistent advocacy, strong leadership, and a deliberate and thoughtful buildout of the bicycle network have helped transform New York City into a place where more than 450,000 bicycle trips are made every day.

But despite the embrace of bicycling and the rollout of some game-changing bicycling infrastructure, the ability to bicycle safely in New York City remains largely unprotected. Vulnerable riders suffer death and injury every day. In 2016, the third year of New York City’s Vision Zero initiative, which seeks to eliminate road deaths and serious injuries by 2025, 20 bicyclists were killed on city streets; over 4,500 were injured. Just weeks before the publication of this report, a terrorist drove down the Hudson River Greenway at a high speed for over a mile, killing eight people and seriously injuring a dozen more. That a vehicle could be weaponized on one of the most popular bike paths in the world is just one piece of proof that today’s bicycling infrastructure fails to protect today’s bicyclists. Hundreds of bicycle and pedestrian-dense areas across the city, from Central Park to the Queensboro Bridge, remain unsecured and at risk for a similar tragedy.

Further, many political leaders remain woefully out of sync with New Yorkers passion for bicycling. This culture gap is evident in the New York
Police Department’s policy of responding to bicyclist fatalities with ticket-stings that target bicycle riders instead of lawless drivers, and their trend, in the aftermath of crashes, of leaking pre-investigation conclusions to the press, and blaming bicyclists for their own deaths. In October, Mayor Bill de Blasio announced an equally wrongheaded crackdown on the use of e-bikes – electric bicycles largely used by low-income, immigrant delivery workers – despite a total lack of evidence that they pose any danger. The crackdown, in fact, appeared to be in response to a WNYC segment about a Upper West Side investment manager with a personal vendetta against electric bicycles. Bicycle policies like these, which are deaf to bicycling culture and driven by the complaints of the wealthy few, make it impossible for New York to become a truly world-class bicycling city.

It’s clear that much has been gained, and that much remains to be done, but in part, Transportation Alternatives’ goal for bicycling in New York City remains unchanged from when the Bicycle Blueprint was published over two decades ago. Its 1993 introduction reads, “Let us banish the fear from cycling. Let every New Yorker who wants to, feel free to hop on a bike.” We remain committed to cultivating that freedom for every New Yorker, regardless of age, ethnicity, income, or locality. But today, we also commit to bicycling infrastructure that is redistributive and just, and will focus on access to bicycling in those neighborhoods where street safety has been historically ignored.

In this report, we explain what needs to change about bicycle infrastructure, bicycle laws, and bicycle policy to make New York a truly world-class bicycling city. Our recommendations are culled directly from conversations with thousands of New Yorkers, bicyclists and non-bicyclists alike. Bold leadership and meaningful investment in these commonsense improvements will save hundreds of lives and lead our city to a safer, more sustainable, and more equitable future.

The greatest city on Earth should expect nothing less. We hope you will join us for the ride.

Paul Steely White
Executive Director
Transportation Alternatives
Executive Summary

Bicycling is New York City’s fastest growing mode of transportation. Today, three-quarters of a million people regularly ride a bicycle in New York City, and that number is growing faster than the economy, or the population. At the start of his first term, Mayor Bill de Blasio set a goal for 2020: Double the number of New Yorkers who regularly ride a bicycle.

To understand this explosive growth, outline how Mayor de Blasio can meet his goal of 1.5 million bicycling New Yorkers, and explain what the City of New York must do to protect and nurture this growing population, Transportation Alternatives conducted a series of intensive focus groups, and interviewed thousands of New Yorkers. The result is BikeNYC 2020: What New York Needs to be a World-Class Bicycling City — a report on the state of bicycling, and its future. Transportation Alternatives found:

• More than two-thirds of less frequent riders said the most important thing the City of New York could do to encourage them to ride more is build more protected bike lanes.

• 71% of those who used to ride, but stopped, said that feeling unsafe played a role in their stopping, and 21% stopped directly because of a harrowing incident.

• 92% of former bicyclists said that more protected bike lanes would encourage them to ride again.

• 99% of less experienced bicyclists feel safer in a protected bike lane.

• 88% of frequent bicyclists are concerned about being hit by a driver, and 94% of frequent bicyclists have encountered at least one car parked in a bike lane in the past month.

This research demonstrates that the City of New York’s investment in protected bike lanes has been critical to the growth of bicycling, and that the widespread installation of this infrastructure is critical to its continued growth.

However, the past build-out of the bicycle network has largely benefited the central business districts of Manhattan and Brooklyn, disregarding neighborhoods that already suffer from poor access to transit. This inequity is compounded by disproportionate police action against predominantly immigrant delivery workers, and in Black and Latino neighborhoods.
To combat this inequity, and to meet New York’s transportation needs and desires, as well as meet Mayor de Blasio’s goal of doubling bicycling by 2020, Transportation Alternatives recommends:

• Invest the lion’s share of street redesign resources in neighborhoods that have historically been ignored.

• **Guarantee that every New Yorker will live within a ¼ mile of a protected bike lane by 2020.**

  • Couple every redesign of a major street with the installation of a protected bike lane. In the past fiscal year, 83 miles of bike lanes were added to New York City streets, 80% of which were unprotected. But over the same time period, the City found resources to resurface 1,321 miles of roads, yet failed to take the opportunity to integrate protected bike lanes on these streets.

• Launch trial projects to prove the efficacy of bicycle superhighways, protected intersections, and car-free PeopleWays to encourage more bicycling, and make more streets safe for bicycling.

• Build dedicated, protected bicycle access on every bridge, working with other agencies as required.

• **Facilitate a five-borough bike share system by directing public funding from City Hall and loosening current requirements to help Citi Bike reach every neighborhood.**

  • Prioritize the passage of laws in the New York City Council that facilitate bicycling, including the legalization of the “Idaho Stop” at red lights and of safe electric-assist bikes, granting bicyclists the right to proceed on walk signals with leading pedestrian intervals, and permission for parents to ride on sidewalks beside their children.

• End police practices that depress bicycling, such as ticketing for minor bicyclist infractions in places where drivers have killed bicyclists, and the inequitable crackdown on commercial bicyclists.

• Increase the installation of bicycle parking in residential and commercial neighborhoods.

• **Work with the City Council to create an exemption for Vision Zero Priority Corridors in Local Law 61 of 2011, which suggests the necessity for community board hearings on the construction or removal of bicycle lanes.**
The Vision for Biking in New York

Mayor de Blasio has made it his goal to double biking in New York City from 2013 levels by 2020. Applied to the number of people riding a bike at least several times a month\(^1\), this comes to approximately 1.5 million New Yorkers riding regularly.

Transportation Alternatives wholeheartedly supports the goal of doubling cycling, but we have yet to see a clear, strong policy direction that will achieve it. This report lays forth the steps Mayor de Blasio and his administration must take in order to make this dream a reality, and can serve as a reference to what bicyclists want and need in order for their mode of transportation to be as safe and accessible as possible.

While doubling the number of riders may seem like a tall order, it is important to note the context of very recent history. In 2007, about 21,000 New Yorkers were commuting to work by bicycle. By 2015, this number had more than doubled to 45,000. Similarly, while New Yorkers were making 76.7 million annual trips by bicycle in 2007, by 2015 this figure had shot up to 164.3 million annual trips.

Crucial to the expansion of bicycling during this time period was the construction of 54.2 miles of protected bike lanes to complement several hundred miles of Class 2 painted lanes and sharrows.\(^2\) An even more massive build-out of protected bike lanes will be needed to encourage more New Yorkers to ride.

Why should New York City make the efforts to expand the bike lane network, undertake major investments in bridges and greenways, expand bike share and bike parking facilities, and improve opportunities for bicyclists? Just as there are many reasons to ride, there are many reasons to want a populace that believes in bicycling. Some benefits may seem purely personal: riding a bicycle is aerobic exercise, and many riders report it enhances their mood and reduces stress. But there are wider societal benefits as well: Public health researchers analyzing New York City’s investment in bike lanes found that they are “an exceptionally good value” compared to the majority of preventive interventions, “because they simultaneously address multiple public health problems.”\(^3\)

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In addition, bikes are a spatially efficient mode of transportation, and greater bicycle mode share would mean less congestion, a serious problem in the Manhattan Central Business District and other busy locations in the city. Bicycles are also emissions-free, helping New York City reach its climate goals.

At the highest level, bicycling is essential for a livable city, as proven by many of New York’s peers around the world that have invested in cycling infrastructure and seen massive improvements to quality of life. Bicycle promotion goes hand-in-hand with the recognition that too much public space is allocated to private cars, the most spatially inefficient form of transportation.

Through bold action, cities like Paris, London, and Oslo have transformed their street network to encourage more biking, embracing innovations that New York should follow. So, the question is not why should the City promote riding a bicycle, but rather, why should the City build out an extensive, connected, high-quality bike lane network for all New Yorkers?

Crucial to the expansion of bicycling between 2007 and 2015 was the construction of 54.2 miles of protected bike lanes.

The Vision Zero Case for Bike Infrastructure

One of the most significant differences between the time when the Bicycle Blueprint was published and today is that New York City has adopted Vision Zero as official policy. Vision Zero, a street safety initiative based on the foundational premise that no level of fatality on city streets is inevitable or acceptable, aims to eliminate deaths and serious injuries on New York City streets by 2024. Enacted by Mayor Bill de Blasio as one of his flagship policies upon taking office in 2014, Vision Zero has led to the allocation of record amounts of new funding for street re-engineering and a renewed emphasis on building protected bicycle infrastructure.

However, with 20 bicyclist deaths recorded in 2016, it is clear that bicycle infrastructure is still inadequate, and that significant increases in protected bike lanes are necessary in order to encourage more people – especially those who may be nervous about the prospect of biking in New York City – to choose
bicycling. The vast majority of bicyclist deaths in New York City – 89% – happen where there is no bicycle infrastructure.4

To date, only two fatalities are known to have occurred when bike riders were using a protected lane, and in both cases, the riders were killed when they entered unprotected intersections and drivers made unlawful moves against them. Bicyclists know that riding should be fun – and it’s far more fun to be free from worries about reckless drivers.

In order to both maximize ridership and minimize risk, more protected bike lanes are a necessity.

More bicyclists on New York City streets means more safety for riders. Researchers have found evidence there is indeed safety in numbers – that, the greater the number of people riding, the less likely they are to be involved in a crash.5 This is likely because drivers change their behavior in the presence of a group. The Department of Transportation’s Cycling Risk Indicator shows that while the number of people riding in New York City has increased in recent years, the number of bicyclist injuries and fatalities has not risen accordingly, meaning that the risk of riding a bicycle has actually decreased.6

An evaluation of two-way protected bike lanes in Montreal found that the risk of rider injury in this type of infrastructure is 28% less than in an unprotected street.7 Findings from New York City’s one-way arterial street bike lanes have found similar results. In addition, protected bike lanes have a significant impact on decreasing crashes between motor vehicles and pedestrians thanks to their overall traffic-calming effects, with pedestrian injuries down 22% on these corridors.8

Street design is a systems approach to safety, benefiting every road user when streets are engineered to protect the most vulnerable. Simply put, bicycle infrastructure is good for all New Yorkers, and more people on bicycles benefits the city as a whole.

4 New York City Department of Transportation (2017) “Safer Cycling: Bicycle Ridership and Safety in New York City” Online available
In order to both maximize ridership and minimize risk, more protected bike lanes are a necessity.

**The Sustainability Case**
Congestion has significantly worsened in New York City. The root cause of this is too many cars, and the solution is the embrace of more spatially-efficient forms of transportation like bicycles.

Contrary to popular misconception, data from Manhattan avenues on which protected bike lanes were installed shows that these lanes do not worsen traffic congestion; in fact, they can make multi-modal traffic flow more smoothly, with every road user in their place.

Not only do bicycles occupy considerably less space than cars, they are also a zero-emissions choice. And with the development of increasingly innovative cargo bicycles, there exists the possibility of replacing the pollution and double-parking of trucks with sustainable bicycle deliveries. The City’s 80 X 50 plan for drastically reducing greenhouse gas emissions has recognized the significant role transportation has to play in making New York City more environmentally friendly. According to the 80 X 50 action plan, biking mode share will need to increase from less than 2% at present to approximately 10% in 2050 in order to help the City achieve the goal of 80% less carbon emissions.

This massive increase will require a significant number of car journeys to switch to bicycles. This is doable: According to the NYC DOT, 56% of car journeys in New York City are for three miles or less, easily bikeable. But many people who are confident enough riding a bicycle to make those short trips are already doing so. The vast majority of this mode share shift will have to come from new bicyclists. For longer trips, including many commutes, only major investments in cycling infrastructure will make this change possible.

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On a similar note, a bicycle-friendly city with a bicycle-ready population is well-positioned to be resilient to environmental challenges. As was made abundantly clear in the aftermath of Superstorm Sandy in 2012, the catastrophic weather events that are becoming more frequent can easily shut down subway, rail, and bus service, disrupting all aspects of city life. An extensive and well-maintained bicycle network can offer a transportation option that remains accessible even when motor vehicles and other forms of public transit are disabled, unlocking the city in times of need.

The Equity Case

While there is a tremendous diversity in the profile of cyclists across New York City, riding a bicycle is still viewed as somewhat “pale, male, and stale”: the stereotypical bicyclist is a white man, most likely in middle age, with significant disposable income and a tendency to thrill-seek.

Too often lost in discussions of bicycle policy are the voices of an estimated 50,000 delivery bicyclists, who have lower incomes and are more likely to be from immigrant and ethnic minority backgrounds. Delivery bicyclists are
typically either denied their side of the story in the media as other people comment on them, or they are demonized as nuisances or menaces.\textsuperscript{13}

While every new person on two wheels counts, New York cannot expect to double bicyclist numbers only by getting more of the same demographics of people riding. The City must take concrete steps to ensure that bicycle infrastructure is built in the neighborhoods where street safety has historically been neglected, which tend to be lower-income areas where a majority of residents are people of color.

The Department of Health found that between 2007 and 2014, frequent bicycling increased in all neighborhoods, but did so to a much lesser extent in neighborhoods characterized as having high or very high poverty.\textsuperscript{14} Likewise, the tendency to ride a bicycle at least once a month is significantly higher in low-poverty households than in those which are poor or very poor. Among frequent bicyclists, men still outnumber women more than two to one, and a persistent gap in likelihood to ride a bicycle persists between white and black New Yorkers.

A 2017 Manhattan Institute study found that, in general, Vision Zero improvements have been concentrated in wealthier neighborhoods, particular in Manhattan, leaving many disadvantaged areas with majority Black and/or Latino populations without lifesaving infrastructure for both bicyclists and pedestrians.\textsuperscript{15} A City study published in January 2014, focusing on bicyclists in Central Brooklyn, suggested that “enhancing infrastructure that supports active transportation may be effective in reducing health inequities in low-income urban communities.”\textsuperscript{16} Together, these findings strengthen the argument for protected bike lanes as a road to greater equity in New York City.

Existing inequalities can simultaneously reduce the uptake of bicycling and reinforce an inequitable situation: Research led by Rutgers University’s


Charles Brown has found that in Black and Latino communities, fear - of assault, theft, and police profiling - may form a significant barrier to increasing riding, and that lack of political power often prevents Blacks and Latinos from having a fair share of input in the bicycle planning process.\textsuperscript{17} The result is that not only does this inequality stop some people riding bicycles when they might like to, it also means that bicycle infrastructure doesn’t properly take every demographic group into account.

The importance of improving infrastructure cannot be overstated, as it can indirectly address other inequalities while providing safer and more inviting places to ride. For example, while adults who ride a bicycle on the sidewalk can receive either a moving violation or a more serious criminal court summons, there are drastic differences among precincts in how frequently these are given. Considering that many bicyclists ride on the sidewalk because it is unsafe to ride in the street – meaning, there is no protected bike lane – inequalities in bike lane coverage translate to inequity in legal consequences. While New York City’s police precincts are almost evenly divided between those that are majority Black and Latino and those that are not, the former see two-and-a-half times the number of criminal summonses for riding on the sidewalk.\textsuperscript{18} The lack of a safe place to ride turns attempts to stay out of harm into criminal acts.

Where protected bike lanes have been installed, businesses have thrived.

Vision Zero can serve as a force for ending the “tale of two cities” evoked by Mayor de Blasio in his campaigns. One step towards refocusing street improvements on equity would be for the City to follow Seattle’s lead and appoint an expert to a new position, Transportation Equity Manager, for Vision Zero. This position would recognize that improvements in transportation, particularly bicycle infrastructure, have not been distributed equitably.

With a proper focus on planning, the City can ensure that all communities can benefit from opportunities for safer active transportation, and that none are treated as afterthoughts or as less deserving of these necessities.


The Civic Case

New Yorkers don’t like playing second fiddle to anybody. Nobody comes to New York City with the hopes of being just good enough, a perpetual runner-up. But other than taking a blow to our pride, failure to improve bicycling conditions can cause a heavy hit to the City’s wallet.

The necessity to redesign streets quickly and effectively was made even more clear by the December 2016 ruling of the New York State Court of Appeals, the highest court in the state, in Tuturro v City of New York. The Court found that the City could be held 40% liable for a 2004 crash in which twelve-year-old Anthony Tuturro of Brooklyn was hit and severely injured on his bicycle by a speeding driver on a stretch of Gerritsen Avenue that was known to be dangerous, but which had not received a sufficient speeding study or intervention to calm traffic. As Tuturro’s injuries will require lifelong care, this translates to millions of dollars that the City is responsible for paying.

If improvements to other known dangerous streets proceed too slowly, the City could be vulnerable to many more judgments like this one. Therefore, there is both a financial argument and a legal basis for redesigning streets to be safer, and it should be done before there is a chance for any more New Yorkers to suffer lifelong disabilities due to preventable crashes, and so that all New Yorkers will benefit.

In 2016, the City paid out $30.8 million in personal injury claims related to roadway defects and $89.7 million for injuries sustained in collisions with City vehicles.19 Even if the obvious human suffering caused by crashes is set aside to consider only the fiscal impact to the City, clearly prevention is preferable to an attempt to fix the problem at a later date.

Central to the re-engineering of streets to better serve bicyclists (and pedestrians) must be the recognition that for too long, the majority of New York City’s public

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spaces – roads – have been dedicated to serving relatively few users with cars at the expense of the wider city population. These public spaces are provided as free or below-market-rate private property storage in the form of car parking while bicyclists and pedestrians are forced to scramble for the relatively small amount of room they can get. In the only American city where fewer than half of households own a car, this is spatially inefficient and fundamentally inequitable.

The promotion of cycling has further benefits in promoting the city itself. Notably, where protected bike lanes have been installed, businesses have thrived: Locally-based businesses on Manhattan’s Ninth Avenue saw a 49% increase in retail sales after the opening of the protected bike lane, compared to 3% for the borough as a whole.\(^{20}\)

Likewise, after bike lanes were installed on First and Second Avenues, commercial vacancy rates were 47% lower than before the street redesign. The rest of the city saw only a 2% decrease in vacancies for the same time period. Bicycle infrastructure is good for business, and good for New York City.

The Public Health Case

Bicyclists have long espoused the health benefits of their transportation choice, and recent research has begun to quantify them.

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A research team from the Columbia University Mailman School of Public Health found that the 45.5 miles of bike lanes built by the City in 2015 likely increased the probability of riding a bicycle by 9.32%. Their model then determined that over the lifetime of all New York City residents, bike lane construction produced additional costs of only $2.79 per person while improving public health outcomes even for those who do not ride, making bicycle infrastructure more cost-effective in improving health than many other preventive approaches. This study, specifically tailored to New York City’s unique environment, makes it abundantly clear that if the City wishes to take action to improve public health, building bike lanes is an excellent choice.

On a neighborhood level, Citi Bike has already been harnessed as a tool of health promotion, with doctors writing prescriptions for free memberships through the Prescribe-a-Bike program at Interfaith Medical Center in Bedford-Stuyvesant – just one creative way in which encouraging bicycling can lead to positive outcomes. Programs like this should be promoted by the City so that they can extend to all New Yorkers.

We call upon the New York City Department of Health and Mental Hygiene to play a larger role in Vision Zero, and to take the opportunity to be at the forefront of research into the specific health impacts bicycling can have on urban populations.

In Appendix A of this report, we have compiled recent peer-reviewed scientific research into the health benefits of bicycling, gleaned from around the world. While not all results from outside New York City will be directly transferable, these studies provide strong support to a growing body of research that should be harnessed to guide policy.

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21 Gu et al, ibid.
Where Did You Go, Bike Master Plan?

Many of the ideas presented in this report are not new. In fact, some are over twenty years old, and appeared in the New York City Bicycle Master Plan released by the city in 1997. They appear again here because we are still waiting for them to arrive after two decades.

The Bicycle Master Plan was the product of the Bicycle Network Development Project, a joint effort between the Department of Transportation and the Department of City Planning to illustrate the actions the City would need to take in order to increase cycling. Citing the bicycle as “a liberating, healthy, inexpensive, environmentally beneficial and, in general, fun way to travel,” the Master Plan incorporated input from Transportation Alternatives and put forward a vision for a 909-mile citywide network.

Then as now, the majority of routes were unprotected, but the plans for this network took into account the need for designing roadways suitable even for beginners, and considered criteria including low conflict with motor vehicles, directness, to major origins and destinations, and connections with other routes.

Even in 1997, the City was drawing attention to the need for the bicycle network to be not just expansive, but connected – facilitating movement across the entire city. Bedford and Franklin Avenues in Brooklyn are cited as linking colleges and hospitals, while University Avenue is granted priority status for linking the Mosholu-Pelham Greenway and Van Cortland Park with Manhattan via the Macombs Dam Bridge. Northern Boulevard was made notable by its service as a cross-borough connection all the way from Long Island City to Long Island proper, and a Flushing-Jamaica route was needed to specifically link two major commercial centers in an outer borough.

These links were seen as not only desirable, but urgently necessary, because they conveniently took riders where they needed to go. Yet a look at the latest New York City bicycle map shows the network is still largely piecemeal outside Manhattan. The Master Plan’s section on access to mass transit acknowledges multi-modal trips and the necessity of making it easier to link up bicycles and other modes with important amenities like dedicated parking at intermodal centers and bicycle racks on buses – things now commonplace in other cities, but barely existent in New York.

Notably, while Manhattan routes were built out, of the outer borough streets flagged as Proposed Priority Bicycle Routes in 1997, none has a class 1 protected bike lane today. Most, including University Avenue, the Grand Concourse, Prospect Avenue, and Crotona Avenue in the Bronx; Bedford Avenue, Franklin Avenue, Bergen Street, and Dean Street in Brooklyn; 164th Street and small portions of Skillman Avenue and 43rd Avenue in Queens, and the eastern end of Richmond Terrace in Staten Island, now have class 2 bike lanes painted on the street.

Some of these so-called priorities, like First and Second Avenues in Sunset Park and Parsons Boulevard in Flushing, have nothing. Our survey found that painted bike lanes do not make bicyclists feel nearly as safe as class 1 protected bike lanes do, and thus it is unlikely that these class 2 lanes attract or reassure new bicyclists. While a protected bike lane will soon be built on the Grand Concourse, it should go without saying that a city that takes twenty years to fulfill a priority is not a city that is taking the needs of bicyclists seriously enough.
In a precursor to Vision Zero’s “Three Es,” the Bicycle Master Plan mentioned the importance of Engineering, Enforcement, and Education – but crucially, they included a fourth E: Encouragement. Reading the Bicycle Master Plan, one gets the distinct impression that riding a bicycle was something the City truly wanted more New Yorkers to try, and crucially, they were proposing a number of concrete and realistic initiatives to make it safer, easier, and more fun to do.

As fear is typically the barrier to riding, encouragement in the form of improvements for safety and convenience are likely to best nudge non-riders towards giving bicycles a try. This attitude in the Master Plan is even more impressive, in retrospect, considering how fewer New Yorkers rode bicycles and how little infrastructure was in place. In fact, in 1997, in-line skaters outnumbered bicyclists two to one. It is inexplicable how New York City can still be waiting on so many plans to become reality 20 years down the line, with bicycling now far more popular and normalized.

A bike lane on Queens Boulevard over the Sunnyside Yards, a dedicated bicycle route over the upper path of the Henry Hudson Bridge, a multi-use path on Atlantic Avenue in Queens, a Shore Parkway bicycle path to JFK Airport: the plans of 1997 are the maybe-someday dreams of 2017. What happened? Both in attitudes to bicycling and in planning for a connected bike lane network, New York City seems to have moved backward in some respects even as the number of bicyclists skyrocketed.

Bicycle infrastructure today is characterized by its piecemeal, fragmented nature, as if it were an afterthought. But there is no need to reinvent the (bicycle) wheel with regard to planning for the next wave of bicycling improvements in New York City. The Bike Master Plan should be revisited, completed, and then updated for the generation that has grown up in a New York where biking is a mainstream transportation option.
Findings from the BikeNYC 2020 Survey

The best way to find out about the state of bicycling in New York City is to talk to bicyclists themselves, in all their diversity of experiences and opinions. Starting in September 2016, Transportation Alternatives launched a survey of New Yorkers in order to find out exactly how they feel about cycling in the city. More accurately, we launched four surveys, each for a specific type of New Yorker.

While we intended to primarily hear from riders, characterized as either the hardcore “Bike Fearless” or generally enthusiastic “Bike Lover,” we also created a set of questions specifically for “Bike Curious” people who used to ride but stopped, or who haven’t ridden yet but would consider doing so in the future, in order to learn more about barriers to bicycling.

We also devised a section, “Bike Humbug,” for people who are certain they will never ride a bike in New York City, so that we can better understand how they feel about bicycles and bike infrastructure. Optional additional mini-surveys after the main banks of questions probed attitudes towards Citi Bike, riding with family, and additional aspects of New York City biking.

A total of 6186 New Yorkers took the Bike NYC 2020 survey. They were characterized as follows:

Bike Fearless: 2648 respondents; 43% of total
Bike Lover: 2679; 43% of total
Bike Curious: 777; 13% of total
Bike Humbug: 82; 1% of total

In addition, twelve focus groups were held with a variety of diverse respondents from around New York City to delve into greater detail about what they liked and disliked about bicycling, and what would make their lives on two wheels easier. Below are the main findings of our surveys and focus groups.
Bicycles fulfill New Yorkers’ needs. Convenience was the number one reason cited by frequent riders as to why they ride a bicycle, with one-third (34%) saying this is the most important factor to them. Next in importance were simply the fact that riding a bicycle is fun (28%), and that it is a healthy transportation option (24%). Concern for the environment and the fact that riding a bicycle is cheaper than some other modes of transportation were relatively less important for frequent riders.

Eighty-eight percent of frequent riders commute by bicycle at least some of the time, and 64% of people who are interested in riding a bicycle in the future say that commuting is something they’d like to do. In focus groups, young people cited bicycling as a way they can be autonomous and avoid people who hassle them on public transportation. With a bicycle, they can choose where they want to go, whenever they want to go.

Other respondents said that riding gives them a sense of control over their transportation, and puts them in a good mood for the day ahead. Three-quarters of frequent riders (76%) wish they could ride even more, and 92% agree that riding a bicycle is a good way to spend less money on transportation.

The network needs improvement. Almost two-thirds of frequent cyclists (62%) said the most important thing the City could do to improve bicycling would be to build more protected bike lanes – far more important than increasing enforcement (24%), expanding Citi Bike (3%), or providing bicycle education to children (3%).

However, simply building the lanes isn’t enough: Almost all frequent riders (94%) say they have encountered cars parked in bike lanes in the past month. Nine
in ten (91%) have encountered potholes or bad pavement conditions in the past month, and significant majorities mention worn-out lane markings, aggressive or rude drivers, drivers who don’t obey the law about sharing the lane, and close encounters with opening car doors as blighting their rides.

**Comfort and confidence increase with lane protection.** Among less-frequent bicyclists, only 22% say they feel comfortable bicycling on streets that have no bicycle facilities at all. But a simple painted lane gives confidence to 83%, a painted buffer 91%, and a parking-protected lane makes 99% feel better about riding.

More than two-thirds (68%) of less frequent riders say that the most important thing the City could do to encourage them to ride more often is to build more protected bike lanes. Even those who consider themselves fearless bicyclists aren’t huge fans of riding on streets with no lanes: 64% of this group are comfortable riding there, indicating that frequent bicyclists know that experience and confidence can’t guarantee a safe trip.

Focus groups with a diverse range of participants echoed this feeling: Paint provides no protection against reckless and disrespectful drivers. Therefore, in order to get more people riding in New York City – especially those who may be uncertain about their abilities, fearful for their safety, or not sure whether bicycling is “for them” – a greater build-out of protected bike lanes...
lanes is crucial. New bicyclists will not flock to streets that are actively inhospitable to them, or that reinforce their suspicion that bicycling is dangerous. One focus group participant, an elderly woman, said that fully protected bike lanes are they only way she rides – she simply will not go outside greenways or protected bike lanes because she feels, at her age, that her life would be in danger.

**Perception of danger can be more powerful than actual risk.** Of those who used to ride but stopped, 71% say that feeling unsafe because of drivers had a role in why they quit. However, only 12% of this group say they actually had a crash or bad experience strong enough to make them not want to ride anymore.

Of those respondents who have never ridden a bicycle in New York City, but wouldn’t rule out trying in the future, 80% cited fear of drivers as a reason why they haven’t started riding yet, and 67% mentioned the lack of protected bike lanes making them feel unsafe.

The DOT’s Cycling Risk Indicator continues to show a downward trend of risk of personal injury as the number of bicyclists increase, but statistics alone cannot surmount personal worries that riding a bicycle can be dangerous. The good news is that protected bike lanes provide that crucial reassurance: 92% of former New York City bicyclists say that more bike lanes would encourage them to get back on a bicycle.

**Fear is still a factor.** Eighty-eight percent of frequent bicyclists indicate they are concerned about being hit by a motor vehicle while riding in New York City. Thirty-nine percent report having ever been involved in a crash with a motor vehicle in New York City, with outcomes ranging from no damage to serious injury.
Of those who reported their crash to police, 60% say they are unsatisfied with the how their complaint was handled. Notably, 9% of bicyclists involved in crashes say that they attempted to make a report, but bad experiences during the process put them off completing it.

**Storage space.** More than half of ex-riders mentioned that lack of a secure place to store a bicycle – either inside or outside – played a role in why they stopped. A similar proportion of people who have never ridden in New York City, but would like to in the future, are concerned they won’t have somewhere safe to keep a bicycle.

Concerns about bicycle theft, or lack of bicycle storage at the work place, also dissuades a significant proportion of frequent cyclists from commuting by bicycle. Thirty-eight percent of frequent riders say they have difficulty finding a place to park and lock their bicycle.

Several respondents stated the most important thing the City could do to improve bicycling would be to provide more or better bike parking. Likewise, in focus groups, many participants voiced their desire for a variety of better secure parking options, including monitored garages and automated systems.
There are still many barriers to bicycling. Among New Yorkers who ride infrequently, used to ride but stopped, or who are considering possibly riding in the future, a variety of factors stand in their way. In addition to concerns about bicycle storage, one in five (21%) mentioned their family and friends don’t want them to ride a bicycle. A similar proportion (19%) say it is too expensive to buy a bicycle or the necessary gear. One in ten (10%) do not feel physically fit enough to ride.

Most notably, only 46% of this group says that the benefits of riding definitely outweigh the hassles, indicating that having convenient access to a bicycle – and safe streets on which to ride it – needs to be made easier and more adaptable to New Yorkers’ lifestyles.

Citi Bike is popular and desirable. 68% of Citi Bike users say that at least once a week they make a trip by Citi Bike that they otherwise would be making by a different mode. More than half of those trips (53%) would have been on the subway if Citi Bike wasn’t available, indicating that an expanded Citi Bike network could help alleviate strain on a mass transit network in dire need of repair. After all, 95% of frequent riders consider a bicycle to be a good alternative to public transit!

Citi Bike trips are made for a variety of practical reasons: errands and appointments (82% of users), social life (71%), and work commuting (61%) are the most popular. The most common reasons frequent bicyclists give for not using Citi Bike is a preference for their own bicycle (65%), a lack of stations near home (37%), and the cost of membership (32%).
A decade ago, New York City was seen as a leader in urban bicycling. Today, other cities have innovated and adopted bicycle-friendly planning to the extent where New York risks significantly falling behind. By adopting infrastructure improvements seen in other cities, custom-tailored to our unique urban environment, New York can once again inspire its peers while providing the best possible experience for bicyclists.

**Cycle Superhighways**

At present, the New York City protected bike lane network suffers from a lack of connectivity and well as a near-absence in huge swathes outside Manhattan. This means few protected routes that can offer a “one lane ride” from starting point to destination for the majority of New Yorkers. While protected bike lanes are gradually being built along some of the most heavily trafficked arterial roads in New York City, the City must take their construction to a new level and link the Central Business District with outer borough destinations, and outer borough commercial centers with each other, through the construction of “Cycle Superhighways.”

The most practical model for Cycle Superhighways is London, where seven routes running from outer London into or across central London have been built and more routes are under construction. The Superhighways, arranged in a radial pattern, allow Londoners to commute along popular lines with high visibility and full separation from motor vehicle traffic on many stretches. They also offer connectivity with the London Underground, for riders who wish to mix their modes of travel.

Many Superhighway routes offer scenic views of the river and historic buildings. Bicyclists are not shunted, in the name of safety, to where drivers don’t want to go; rather, they receive the same privilege of direct routes in the center of the city.

While the Superhighways do contain segments that lack physical separation from drivers, a New York version could be carefully planned for full protection. New York has an advantage over London in that...
our street layout is largely gridded, rather than the irregular and winding patterns of arterial roads in the much older city. This makes planning for potential cycle superhighway routes in New York City much more direct.

New York routes would travel over the East and Harlem River Bridges, with Staten Island offering a protected lane to and from the St. George Ferry Terminal with radial connections to major attractions like the Staten Island Mall, Fresh Kills Park, and the College of Staten Island. One potential route could supplant the Hudson River Greenway alongside Riverside Drive north of 59th Street, over the Henry Hudson Bridge, and up to the Westchester County border.

Other cities have innovated and adopted bicycle friendly planning to the extent where New York risks significantly falling behind.

In recognition that more and more commutes are altogether outside the Manhattan CBD, bicycle superhighways should also connect the major centers of activity in the outer boroughs. Just as the Q44 Select Bus Service links Bronx Park, Flushing, and Jamaica via a variety of residential, commercial, and leisure corridors, bicycle superhighways can create convenient routes between destinations that will most likely never see subway service. Even better, this can be done entirely by the City of New York, which has jurisdiction over the road network – no need for long, drawn-out processes or budget squabbles involving the State or the MTA.

The seeds of potential Superhighways have been sown in the recently-built protected bike lanes on First and Second Avenue in Manhattan and Queens Boulevard, and in the pending lanes on Fourth Avenue in Brooklyn and the Grand Concourse in the Bronx. These arterials roads – heavily used by bicyclists and motorists, dangerous if unprotected, and already designated Vision Zero Priority Corridors – could form the basis of a Cycle Superhighway network just as they currently form conduits for motor vehicle traffic.
The firm SLO Architecture has imagined bicycle “speedways” linking the boroughs, combining existing rights-of-way with roads that currently lack bicycle infrastructure. Routes proposed include one through the Bronx that ties together Co-Op City and the Washington Bridge, connecting with the Hudson River Greenway to take riders down to Lower Manhattan. Another links the Williamsburg Bridge with Far Rockaway via Atlantic Avenue and Cross Bay Boulevard, imagining future connections with the Queensway should it be built.

**PeopleWays**

Bicycles do not exist in a vacuum – they are just one option among New York City’s practical alternatives to the private car. As infrastructure is improved for bicyclists, it must take other sustainable mode-users into account, and the concept of the PeopleWay demonstrates the integration of bicycling, walking, and using mass transit at levels that can augment – or even replace – a subway line.

In order to move thousands of people quickly and efficiently, streets must be closed to the spatially inefficient private car. Road space reclaimed from drivers can be converted into wider sidewalks, two-way protected bike lanes, and transitways for the exclusive use of bus rapid transit lines.
Transportation Alternatives introduced the concept of the Manhattan 14th Street and Brooklyn Grand Street PeopleWays shortly after the announcement of the partial closure of the L train for over a year beginning in 2019. The shutdown is expected to impact over 200,000 New Yorkers who rely upon the L train within Manhattan and between Manhattan and Brooklyn. Shifting subway riders who do not have a reasonable alternative route onto the street surface requires a highly efficient system, because the Williamsburg Bridge and its connecting streets cannot accommodate a massive influx of motor vehicles without succumbing to a disastrous level of gridlock. Without dedicated road space, already-slow buses will be further delayed to the point of complete impracticality, while bicycling will become dangerous due to congestion and the associated driver frustration.

Over 40,000 people per hour can move along a PeopleWay’s pedestrian, bicycle, and transit paths, compared to only 1600 in private motor vehicles. With most patrons of businesses along the 14th Street and Grand Street corridors already arriving by foot, bicycle, or transit, these engineering changes will not adversely impact commerce – whereas gridlock without high-capacity alternatives definitely would. Transportation Alternatives has built a broad coalition of business owners, tenants and property owners, and local institutions in support of the PeopleWays, which need not be limited to the L train corridor following this initial project.

The City should first build out these two connected PeopleWays, and then explore the potential for their implementation on other heavily-trafficked streets. Bicycles and buses together can successfully address pressing transportation concerns if adequate facilities are provided for their use.

**Bridges**

The bicycle paths across the East River bridges are well-known and popular, but New York City’s bridge portfolio generally leaves much to be desired with regard to bicycle access.
The DOT has commissioned the firm Aecom to undertake a feasibility study for a possible redesign of the **Brooklyn Bridge**, which may include construction of an entirely new deck to expand bicycle and pedestrian access.¹ At press time of this report, the study was not yet publicly available. Pedestrian overcrowding at this popular tourist destination has made bicycling both inconvenient and dangerous. On the Manhattan side of the bridge, a short segment of two-way protected bike lane was constructed on Park Row in summer 2017, helping to connect the bridge to Lower Manhattan. Also in 2017, the Brooklyn side of the bridge saw improvements to the entry path to the Promenade from Downtown Brooklyn. These improvements, while very welcome, have not solved the fundamental problem of overcrowding on the bridge span itself.

The **Verrazano-Narrows Bridge** linking Brooklyn and Staten Island is the one broken link in the Harbor Ring – a 50-mile path that, if completed, would offer uninterrupted bicycle access in a loop through New Jersey, Manhattan, Brooklyn, and Staten Island. Cyclists are offered access only one day a year for the Five Boro Bike Tour, and pedestrians must be New York City Marathon entrants if they ever want to cross the bridge on foot. As part of the ongoing plans to rehabilitate the bridge, the upper level approaches, lower level suspended deck, and connected ramps and roadways will need reconstruction. The MTA Triborough Bridge and Tunnel Authority, which is responsible for the bridge, has released renderings of a potential shared-use bicycle and pedestrian path in its Master Plan.² However, no commitments have been made to actually build this path.

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The Whitestone Bridge’s pedestrian paths were removed in 1943, and the ability to take a bicycle on the QBx1 bus across the span ended when the MTA Bus Company took over the route from the Queens Surface Corporation in 2005. Since then, any bicyclist wanting to cross between northern Queens and the southeast Bronx has had to take a detour via the RFK Triborough Bridge – a more than 17-mile trip to cover what should be a journey of a few minutes. Fortunately, as of press time there are plans to install bike racks on the Q50 bus, which travels between Flushing and Co-Op City via the Whitestone. The nearby Throgs Neck Bridge has never offered any access to bicyclists or pedestrians.

The RFK Triborough Bridge is open to bicyclists but is in need of major upgrades to become more accessible. At present, bicyclists must carry their bike up a staircase, making this route impractical and dangerous to less confident bicyclists. Current approaches and pathways on the bridge should also be widened to eliminate the need to walk one’s bicycle across the path.

On the Harlem River bridges, bicycles must be walked across the University Heights, Washington, Macombs Dam, 145th Street, and Madison Avenue Bridges, with riding only allowed on the Third Avenue and Willis Avenue Bridges. The High Bridge, reopened in 2015 after over 40 years of closure, is exclusively for pedestrian and bicyclist use, but it operates as more of a park than a utility path and is closed overnight. The Harlem River bridges also suffer from poor connectivity: traveling over any but the southbound Willis Avenue Bridge will deposit a rider on busy streets without protected infrastructure, with many dangerous intersections. The DOT held community workshops for a Harlem River Access Plan in 2015 and 2016, but progress on improving these crossings has stalled with no indication of when a report will be released or changes will be made. It is unknown which, if any, of the proposed protected bike lanes will be built. The DOT must resume work in earnest in order to show that community input is being taken seriously and is not mere window-dressing, and that the concerns of bicyclists traveling between Manhattan and the Bronx are being heard.

The Queensboro Bridge bicycle and pedestrian path, located on the north outer roadway, has suffered from intermittent overnight closings for electrical repair work since 2015. While maintenance work is necessary and unavoidable, the lack of alternative provisions during these shutdowns for people who rely on the path late at night, particularly working bicyclists, is unacceptable. A shuttle bus has

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been offered to bicyclists at times when the path is closed, but users report that it can add 45 minutes or more to their journey. Instead of the inconvenient and circuitous shuttle bus, the DOT should open the south outer roadway to bicycles and pedestrians. Indeed, this side of the bridge should be open even under regular conditions, due to overcrowding on the north side during peak hours. Ideally, the south outer roadway should become a pedestrian-only space, creating an exclusive bike lane in the north outer roadway. In July 2017, Commissioner Trottenberg made a verbal commitment to study the possibility of opening the south outer roadway to pedestrians and bicyclists.\(^4\)

The **Marine Parkway-Gil Hodges Memorial Bridge** allows cyclists to avoid taking a circuitous route between the Rockaway Peninsula and the rest of New York City, and it is particularly highly used during the summer months. However, bicyclists are required to dismount and walk their bicycles across its entire 4022-foot span because the relatively narrow path is shared with pedestrians. This path should be widened, and cautious bicycling should be permitted.

Of the three connections between Staten Island and New Jersey, only the **Bayonne Bridge** makes an allowance for bicycle access, and it is temporarily suspended during a refurbishment program currently scheduled to wrap up in 2019. Prior to this project, bicyclists were required to walk their bikes on a narrow path shared with pedestrians. Neither the **Outerbridge Crossing** nor the **Goethals Bridge** are accessible.

Fortunately, there are some examples of where bicycle usage is being thoughtfully taken into account in upgrades to bridges. Thanks in large part to the efforts of advocates, the Port Authority of New York and New Jersey has committed $118 million for bicycle and pedestrian improvements to the **George Washington Bridge** linking upper Manhattan with New Jersey. The “Restore the George” project will eliminate stairs and reduce the grade of the ramps leading onto and off the bridge, separate pedestrians on the south side and bicyclists on the north side, improve the safety fence and railings, enhance lighting and pavement markings, and create new entry plazas and viewing platforms accessible to bicyclists. These improvements are welcome at a time when both commuter and recreational bicycle use of the GWB is increasing. Unfortunately, the plan falls short on one key safety concern: at only seven feet wide, these paths are only half as wide as guidelines from the American Association of State Highway and Transportation Officials (AASHTO) suggests. Before construction begins, the plans must be revisited to ensure that this once-in-a-lifetime project is planned to optimum standards, not just good enough.

**Greenways**

New York City’s Greenways function as unique combinations of protected bike lanes, pedestrian paths, and parks all in one. Their separation from motor vehicle traffic makes them popular routes for commuter and leisure cyclists alike. The **Hudson River Greenway** along Manhattan’s West Side, part of the Manhattan Waterfront Greenway, is the most heavily-used bike path in the United States. On the Midtown segment alone, over 6000 bicyclists travel daily. However, this path falls short of being a bicyclist’s utopia as space for riders is encroached upon due to construction. Narrow paths along some stretches can create dangerous situations when passing. And as part of the Parks Department’s Riverside Park Master Plan, bicyclists face being detoured.

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away from the river onto a hilly path between 72nd Street and 83rd Street. The impracticality of this route demonstrates that the Greenway is not being taken seriously enough as a transportation facility in full-time use rather than a leisure amenity.

On the East Side, a missing segment of the **East River Greenway** through Midtown is slated to be completed thanks to a commitment of $100 million from the City made in April 2017. An additional $5 million will fill gaps in East Harlem and Inwood, and the City should ensure that the greenways along the East and Harlem Rivers are built out sooner rather than later, and that they are as high-quality as that along the Hudson. Existing segments, in the meantime, need improvements in signage in order to be safer and easier to use.

One report worth revisiting, 2013’s East River Blueway Plan, proposed a bikeway for the East Side that combined environmentally sustainable additions with active transportation improvements. With extreme weather a given in the future, plans like this should be used as models for how state-of-the-art bicycle infrastructure can complement environmental resiliency initiatives.

With these gaps eliminated, Manhattan’s Greenways will essentially form a superhighway around the perimeter of the island. But outside Manhattan, Greenways are less complete.

The Brooklyn Waterfront Greenway will, when completed, provide a fourteen-mile path from Newtown Creek to Sunset Park. At present, it exists as only a few segments.

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Outer-borough transportation hubs need bicycle infrastructure to match.

The **Bronx River Greenway** stretches from the Westchester County border to Hunts Point-Soundview, connecting several parks as well as the Mosholu and

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Pelham Greenways. Like its Brooklyn-Queens counterpart, the Bronx River Greenway suffers from gaps which leave bicyclists unprotected. With so few bike lanes in the Bronx, these Greenways, if fully connected, would form a safe network throughout the borough. Progress on building protected bike lanes on the notoriously dangerous Bruckner Boulevard has been slow, but if fully completed and integrated with the Bronx River Greenway, bicyclists would be able to travel the entire north-south length of the borough, and into Manhattan and Randall’s Island, via protected lanes. This would also have the benefit of improving access to green spaces to currently under-served residents of Mott Haven and Port Morris, and the positive health and social outcomes this would have.10

Progress on the South Bronx Greenway has begun, albeit slowly. Following years of delays due to negotiations over easements, the Randall’s Island Connector, a quarter-mile protected path linking Port Morris with Randall’s Island via a new bridge over the Bronx Kill, opened in 2015. Unfortunately, there is no timetable to connect this path with any other protected bike lanes. The build-out of protected bike lanes on more than a small segment of Bruckner Boulevard is most likely several years away.

Immediate Recommendations for the City of New York:

• Build the 14th Street and Grand Street PeopleWays in time for the L train shutdown in 2019.
• Draft plans for a network of bicycle superhighways in all five boroughs.
• Complete the Harlem River Access Plan to provide safe bridge connections for bicyclists between Manhattan and the Bronx.
• Commit to a shared pedestrian and bike path on the Verrazzano-Narrows Bridge, completing the Harbor Ring.
• Make the Queensborough Bridge’s south outer roadway a pedestrian-only space and create an exclusive bike lane in the north outer roadway.
• Fill in the gaps in the Brooklyn Waterfront Greenway with protected bike lanes, and create a timeline for completing the DOT Master Plan.
• Revisit the 1993 Master Plan for the Brooklyn-Queens Greenway
• Fill in the gaps in the Bronx River Greenway and connect them with new protected lanes on Bruckner Boulevard.

Expanding and Connecting the Network

*Every New Yorker should live within 1/4 of a mile of a protected bike lane.*

We know that the desire to build more protected bike lanes is present. What we need to see from the City of New York is a greater sense of urgency.

The 2016 DOT Strategic Plan called for the construction of at least ten miles of protected bike lanes per year going forward;\(^1\) while we are pleased to see this commitment put to paper, we believe it is insufficiently ambitious and could easily be increased to fifty miles per year. In fact, it is crucial that it be sped up in order to reach the City’s Vision Zero goals.

Multiple stages of the bike lane implementation process - from community consultations, to procurement, to construction - take far too long. If streamlined, the Department of Transportation would be able to carry out far more of its lifesaving work.

However, just as important as having the lanes themselves is that they take people where they want to go. It is not enough to build the lanes. They must connect in logical ways along desire lines in order to enable bicyclists to make it to their destinations on the safest path possible. This grid of protected bike lanes must not only cover the city, but must also link the boroughs in order to facilitate interborough travel. At present, too many protected bike lanes exist only in their own segmented ecosystems, limiting their usage to small parts of the city rather than creating true connections.

A logical starting point comes from the potential for bicycles to solve the “last mile” problem. Outer-borough transportation hubs, where subway, commuter rail, and bus lines intersect, need bicycle infrastructure to match.

**The State of the Network: Borough by Borough**

**The Bronx**

Protected bike lanes are almost nonexistent in the Bronx away from greenways and park routes. This creates an inequitable situation where the routes most necessary for commuting, and the streets running through New York City’s

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most environmentally disadvantaged neighborhoods, are unprotected. What few protected bike lanes there are, are short and disconnected, limiting their benefit.

For example, while a greenway-style bike path has been built on Food Center Drive as part of the commercial redevelopment of Hunts Point, it is shared with pedestrians, and it still requires workers riding to and from work to risk their safety as soon as they leave the immediate area. On a peninsula with frequent tractor-trailer traffic around the warehouses and produce markets, leaving bicyclists to suddenly fend for themselves with no other protected lanes nearby is dangerous and unfair. This path should extend into a protected bike lane on Hunts Point Avenue, a Vision Zero Priority Corridor, which can then link to the small (and hopefully soon to expand) protected bike lane on notoriously dangerous Bruckner Boulevard.

The most heavily used Citi Bike station in the entire system is located outside Grand Central Terminal — but there is no protected bike lane.

As in other boroughs, the DOT has at times deferred to community board opposition to safe streets improvements, making changes only after a tragic death. In 2015, Bronx CB 10 voted against the DOT’s proposed traffic calming improvements on East Tremont Avenue. Even though a community board’s decisions are advisory and not binding, the DOT decided to shelve their plans. Only after 26-year-old cyclist Giovanni Nin was hit and killed while biking on that section of East Tremont in 2016 did the DOT decide to move forward again.

The City has committed to redesigning the Grand Concourse as one of its Vision Zero Great Streets, and this must include a protected bike lane along the entire length replacing the existing painted lane. There is significant public demand for such a lane, which would provide a much-needed protected north-south corridor as well as act as a showcase for high-quality street design on one of the City’s historic boulevards. The many east-west Vision Zero Priority Corridors, such as 138th, 149th, 161st, 165th, and 167th Streets, should also be prioritized for protected bike lanes which will link up with the Grand Concourse and provide useful safe routes.

Brooklyn

A scan of the locations of bicyclist fatalities in Brooklyn reads like a list of neighborhoods completely ignored in the construction of protected bike lanes. Large
swathes of the borough, including those poorly served by the subway network where residents could benefit from riding, have no bicycle infrastructure whatsoever.

In a report published jointly by the DOT, NYPD, and Department of Health and Mental Hygiene in summer 2017, the City established ten Priority Bicycle Districts covering community districts with the highest cyclist KSIs and the least bike lane coverage.² Seven of these districts are in Brooklyn. While the DOT has committed to creating or enhancing 75 bike lane miles in these districts over five years, they have yet to release detailed plans for exactly where these lanes will be built and what balance between protected and painted lanes they will strike.

Atlantic Avenue, a Vision Zero Great Street,³ is slated for redesign, but existing plans for the first phase, in Brownsville and East New York, do not include any kind of bike lane. If a “Great Street” is to live up to the name, it must not fail to include this crucial infrastructure.

**Manhattan**

Manhattan is the borough that has been best served by bicycle improvements, but there is still major room for progress. Above 110th Street in particular there is much to be desired. There is also a lack of crosstown protected bike lanes. In just over two weeks in June 2017, three cyclists were killed in Midtown, all in Vision Zero Priority Areas without protected bike lanes.

Notably, Grand Central Terminal has no protected bike network connections. The most heavily used Citi Bike station in the entire system is located outside the station at Pershing Square, but less experienced riders are discouraged by the need to ride directly into traffic.

Crosstown protected bike lanes must be installed throughout Manhattan even at the cost of parking space loss. Painted lanes have not been good enough because they do not stop dangerous drivers: Xin Kang Wang was killed in May 2017 while riding in the one on East 20th Street when a taxi driver illegally pulled into the lane to discharge a passenger. A true bike network cannot only cover north-south routes; crosstown routes, long neglected, must now come to the forefront.

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Queens

Queens Boulevard has arguably been the flagship street redesign project of the Vision Zero era, transforming from the notorious “Boulevard of Death” to a much safer and enjoyable multi-modal route through the heart of the borough. The $100 million investment means a bike lane currently stretches from Sunnyside to Rego Park, with further build-out scheduled through Forest Hills to Union Turnpike. Unfortunately, there are currently no plans to complete the portions of Queens Boulevard between Union Turnpike and Jamaica Avenue, and between Roosevelt Avenue and Van Dam Street in Sunnyside, as originally proposed by the DOT in 2015. This prevents Queens Boulevard from reaching its potential as a safe and effective link between Queens and Manhattan via the Queensborough Bridge.

For most of the rest of Queens, protected bike lanes are limited to greenways and parks. As in other boroughs, the combination of limited build-out and poor connectivity means that most long journeys are unprotected.

The installation of bi-direction protected lanes alone a small section of Northern Boulevard in eastern Queens is underway, but this long and deadly Priority Corridor requires a much larger build-out of bicycle infrastructure. Injury and fatality hot spots, particularly in Jamaica, Ozone Park, Flushing, and the Roosevelt Avenue corridor from Woodside to Corona, lack bicycle infrastructure.

111th Street in Corona recently received a two-way parking protected bike lane, but only after two years of advocacy in the face of a hostile community board and State Assembly member. While the project eventually went ahead despite this small but vocal opposition, it should have never taken so long in the first place. 111th Street is only one of many examples citywide of where a clear safety case was made for the necessity of a protected bike lane on a dangerous street, but deference to a few interests not representative of the local area forced a long, drawn-out process.

Staten Island

The “forgotten borough” has a paucity of all kinds of bicycle infrastructure, not only protected class 1 bike lanes. While bicyclists have a decent choice of routes if they wish to ride leisurely through the Island’s many parks, including a protected park path on the New Springville Greenway, it is an entirely different story for meeting daily transportation needs on two wheels. There are no on-street protected bike lanes, and only a small number of painted bike lanes.
Richmond Terrace and Bay Street, immediately outside the St. George Ferry Terminal, are slated to receive bicycle lane improvements to enhance safety for the many residents who connect to the Staten Island Ferry via bike. When complete, Stuyvesant Place and Bay Street will have protected bike lanes, but as of press time no timeline for completion has been publicized. At present, the layout of Richmond Terrace requires riders to cross multiple lanes of traffic in order to enter the terminal via Ramp C. Because of how unsafe this route can feel, many bicyclists choose the shorter and more direct route of Ramp D, which requires riding against traffic. On Bay Street, riders are put in the path of bus, taxi, and car traffic. Until these street engineering changes are made, there will be no truly safe route to and from the ferry.

**The State of the Lanes**

Bike lane improvements should go hand-in-hand with pedestrian improvements, part of a greater movement towards reclaiming street space from private automobiles. Already, data from the DOT shows that bike lane improvements also benefit those who may never get onto a bicycle: after protected bike lanes were installed on several Manhattan avenues, not only did safety improve for bicyclists, but these streets also saw a 17% decrease in overall crashes causing injury and a 22% reduction in pedestrian injuries.4

However, protected bike lanes are frequently the site of conflict between bicyclists and pedestrians, who in reality are pitted against each other to fight for a relatively small amount of space while so much more is given to motor vehicles. For example, on Eighth Avenue in Manhattan, sidewalks too narrow to accommodate large pedestrian volumes lead to people walking in the bike lane. This leaves pedestrians in danger, bicyclists frustrated, and each group resenting the other.5 But the problem is not the existence of the protected bike lane: it is the continuing reality that most street space in New York City, where the majority of residents do not own a motor vehicle, is devoted to the private car.

The City has begun to warm to the possibility of improving pedestrian experiences by reclaiming one lane of traffic for an expanded sidewalk on Seventh Avenue near Penn Station. More of this kind of bold action is needed; while it may be politically unpopular to remove car parking or a motor vehicle travel lane, achieving Vision Zero requires this kind of courage. However, there has been no allocation of space for a bike lane on this stretch of the avenue, reinforcing the idea that bicycle and pedestrian enhancements are an either/or scenario - you can choose one mode to privilege, but not both.

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A year-round bicycle network requires year-round maintenance. While snow may temporarily convince some riders with other options to change modes, working bicyclists in particular need access to protected lanes in all weather and by no means should bike lanes be used as storage for snow plowed off motor vehicle lanes – a frequent sight in winter. Even when not outright blocked, after periods of heavy snow, some protected bike lanes around New York City have been left impassable for days, with sudden barriers of snow piled at the approach to intersections. This creates a dangerous situation where cyclists must swerve into traffic on already-slippery streets. The excuse commonly given is that Department of Sanitation ploughs are too wide for protected bike lanes. DSNY should treat bike lanes like any other travel lane: unacceptable to leave covered in snow. This will necessitate the purchase of new fleets that fit with safe street designs.

**A Focus on Intersections**

Almost all crashes in which a cyclist is killed or seriously injured in New York City (89%) happen at intersections. From the street level, this is no surprise: Combine turning drivers, or drivers speeding to make the light, with a lack of physical protection for people on bicycles, and predictably the result will be carnage. Also predictable is the slow adoption of known solutions. So-called Dutch intersections, or protected intersections, address the dangers posed to bicyclists in protected lanes at spots where that protection temporarily vanishes. The DOT’s...
existing “mixing zones” deposit riders in the paths of turning vehicles and are unsuitable for a Vision Zero city. But by combining corner safety islands, forward stop bars for bicyclists, a distance between traffic and bike lanes that changes motor vehicle turn radius and makes bicycles more visible, and bicycle-friendly signaling adaptations, the Dutch intersection design addresses known dangers and does not require any additional road widening to accommodate engineering changes.  

The only two known fatalities to date of cyclists in New York City who were traveling in protected bike lanes happened at intersections, where turning drivers violated their right of way and the loss of any kind of physical barrier had tragic consequences. New York City should seize the opportunity to lead, and install these intersections in the most heavily used segments of the bicycle network.

Bike lane improvements also benefit those who may never get onto a bicycle.

Immediate Recommendations for the City of New York:

• Formalize and codify a hierarchy of street use that prioritizes pedestrians and cyclists over private cars.
• Challenge level of service engineering decisions that call for gaps in protected bike lanes, e.g. Second Avenue in Manhattan
• To ensure equity, follow the data and prioritize bicycle improvements along Vision Zero Priority Corridors and other locations where cyclists are most at risk and which have been historically overlooked. This process should involve the creation of a dedicated position, Transportation Equity Coordinator, at the Department of Transportation.
• Create and publicize a timeline for the construction of protected bike lanes on all Vision Zero Priority Corridors.
• Study the most common “desire lines” of bicycle journeys, and create connections throughout the network so that more trips can be taken entirely within protected lanes.
• Increase the pace of protected bike lane construction with the planned standard of every New Yorker living within a quarter of a mile of a protected bike lane.
• Implement protected intersections and make them the gold standard for safety rather than the mixing zone.

Initiatives for a World-Class Bicycling City

Bicycles will become just as normal on the streets of New York as cars and trucks now seem.

While New York City delights in leading the world in innovation, sadly it lacks many of the provisions for bicyclists that are commonplace in other cities. With careful investment in the expansion of bike share in an equitable and accessible manner, the construction of more basic conveniences for parking and multi-modal transfers, and a cultural shift in law enforcement that relies on data to deter the most dangerous driving offenses rather than punish bicyclists, the opportunities of bicycling could be opened up to far more New Yorkers.

Five-Borough Bike Share

Citi Bike has proven itself a resounding success. After initial obstacles, including delays caused by Superstorm Sandy damage and technical difficulties, Citi Bike has grown to over 115,000 members. Having begun in May 2013 with 6,000 bikes at 332 stations in Manhattan and Brooklyn, by the end of 2017, Citi Bike will have doubled in size, with 12,000 bikes at 700 stations in Manhattan, Brooklyn and Queens.

Over 50 million trips have been taken via bike share in New York City, and prior to the tragic death of Dan Hanegby due to the actions of a negligent charter bus driver in June 2017, there had been no fatalities of users on Citi Bikes.

Citi Bike has immense potential to supplement the existing mass transit network in New York City and make bicycling a practical choice for millions of commuters. However, it will not truly be a practical option for every New Yorker without the kind of expansion that necessitates direct investment from the City government. At present, New York City’s bike share program is unique among those in large cities in that it receives no direct public subsidy. This limits the extent to which the network can expand.

Direct public investment in Citi Bike is a popular idea: According to a Penn Schoen Berland and Transportation Alternatives poll in November 2016, 71% of likely New York City voters support Citi Bike expansion into all five boroughs. Among more frequent riders surveyed by Transportation Alternatives, 83% support public funding for Citi Bike.

The City Council, in its formal response to the Fiscal Year 2018 Preliminary Budget, asserted that Citi Bike has the potential to “resolve the problem of transit and health inequity for New Yorkers of all backgrounds.” Motivate, the operator of Citi Bike, has been involved in discussions with the City of New York about
the City potentially underwriting expansion by no longer requiring Motivate to reimburse the City for lost parking revenue in spaces occupied by bike docks, as well as matters of changing the Citi Bike pricing and advertising models.1

The City should end the requirement that Motivate provide reimbursement for lost parking revenue, as Citi Bike has proven itself to be a far more efficient and publicly beneficial use of street space than car parking. Many on-street car parking spaces turn over once a day, at most. But with approximately seven docks fitting into the space needed to park one car, and bicycles turning over approximately six times per day in peak season, Citi Bike is 42 times more efficient a use of space.

In addition to this, direct funding from the City should be provided in order to help Citi Bike reach locations which would be less profitable than the Manhattan Central Business District and other parts of the current service area.

New York City’s bike share program is unique in that it receives no direct public subsidy, limiting its expansion.

**Payment Integration**

The Metrocard is a New Yorker’s ticket to public transportation, accepted on not only all MTA New York City Transit subways and buses but also on the Staten Island Railway, PATH, the JFK AirTrain, the Roosevelt Island Tram, and certain bus lines in Nassau and Westchester Counties. In theory, a public transit user could travel all the way from the Connecticut state line to the southern tip of Staten Island, via the free DOT-operated Staten Island Ferry, paying only with a Metrocard. The growth of biking as a mode of commuter transportation, and the necessity of improving access to bike share, means the City, MTA, and Motivate should work together to integrate Citi Bike into the portfolio of Metrocard-accessible modes.

The City of Chicago is, as of autumn 2017, working on integrating its Metrocard equivalent, Ventra, with the Divvy bike-sharing system. Because a quarter of Divvy stations are located within one-eighth of a mile of an elevated train or commuter rail station, the City is specifically looking to promote them as “last mile” solutions.2

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Integration with the Metrocard system would help promote a similar outlook towards bicycling in New York, with convenience cited as the top reason for riding a bicycle by our survey respondents.

**Stationless Bike Share**

From China and the western United States, a new model of bike share has emerged within the last year: dockless or stationless bike share. Unlike the Citi Bike model, where all journeys must begin and end at a set location, stationless bike share uses GPS on the bicycles themselves to allow a user to ride to any destination within the service area. While this new model has the potential to expand the service area in which bike share operates, it is still largely unproven within large American cities.

The City of New York should proceed carefully on matters of dockless bike share. In order to avoid the kind of scenarios seen in some Chinese cities, where low-quality bikes have broken and been left in large piles along public streets, operators must prove their bicycles are of high quality and durability before being allowed to operate in New York. In addition, strong guidelines must be issued with regard to where these bicycles may not be parked, and what responsibilities the operator has to swiftly relocate bicycles that are impeding free movement of pedestrians or the access of disabled people to the sidewalk.

As a matter of equity, special consideration should be given to how dockless bike share can specifically address neighborhoods which have been underserved by bicycle infrastructure. For example, in San Francisco, stationless bike share operations protocol requires that at least 20% of bicycles must be located in “communities of concern,” which are characterized by multiple forms of social disadvantage. Operators must also present an outreach plan that is targeted to low-income communities,

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**Most common reasons for never riding a bicycle, stopping riding, or not riding more often:**

- **23%** prefer using public transit

Results of the BikeNYC 2020 survey

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Among those who stopped riding a bicycle in NYC...

- **71%** feeling unsafe played a role in stopping
- **12%** had a harrowing incident
- **39%** worried about leaving bicycle outside

Most common reasons for never riding a bicycle, stopping riding, or not riding more often:

- **75%** feeling unsafe because of driver behavior
- **23%** prefer using public transit
- **56%** worried about leaving bicycle outside

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88% of New Yorkers who frequently ride a bicycle in NYC say they’re concerned about being hit by motor vehicles
and must offer special low-income membership plans. Similarly, in Seattle, 20% of bicycles must be located in zip codes designated as “Tier 1 Priority Hire” neighborhoods due to their combination of low income, unemployment, and educational disadvantages.

However, care must be taken by the City to ensure that disruptive technologies do not use low-income neighborhoods merely as their testing grounds. The presence of dockless bike share must also not be used as an excuse to preclude the future expansion of Citi Bike into any neighborhood.

The implementation of dockless bike share can be used as a catalyst for street redesigns that both improve safety and make bicycling more convenient. For example, “daylighting” intersections - removing the parking spot closest to the crosswalk on each side - and replacing car parking with bicycle corrals will both improve visibility for pedestrians and provide a space to store these bicycles.

Dockless bike share offers a new opportunity to explore how bicycling can be facilitated across New York, but it is crucial that the City not be caught unaware and forced into a reactive position as it was during the initial rise of ride-sharing services. With proper preparation and careful planning, dockless bike share can be integrated into New York City’s landscape in a way that complements Citi Bike and does not impede the access of non-bicyclists to public space.

**Bicycle Parking**

New Yorkers are accustomed to living in small spaces, but the lack of secure bicycle parking dissuades many would-be bicyclists from starting to ride, and makes riding less convenient for those who already do so. While bike share can somewhat address this problem, New Yorkers still need places to park their own bicycles.

Bicycle corrals and parking shelters are in demand and heavily used where present, but are still quite rare sights. At present, the DoITT City-Wide GIS Map of bicycle parking shelters shows only twenty locations across all boroughs. The process for requesting and implementing a bicycle corral is needlessly complicated and long, with businesses being

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3 These locations can be viewed at [http://maps.nyc.gov/doitt/nycitymap/](http://maps.nyc.gov/doitt/nycitymap/) by selecting “Transportation – Bicycle Parking” from the drop-down menu titled “Show Additional Data on Map”
required to present to both the transportation committee and the full board of their local Community Board. Despite the high level of spatial efficiency offered by bicycle corrals, applications can still be rejected due to concerns about losing car parking.

When the barriers to necessary bicycle infrastructure are this high, people who are genuinely willing to improve bicycling in New York are discouraged at every turn and treated as if they are requesting something extraordinarily burdensome rather than a practical, in-demand, relatively inexpensive solution. The Department of Transportation should explore bicycle parking options beyond the current models of racks, corrals, and shelters, heeding technological advancements popular in other countries.

People who are genuinely willing to improve cycling in New York are discouraged at every turn.

**Bicycle on Buses**

New York City lags behind other major cities with regard to connectivity between modes of transportation. Specifically, there are only two bus routes in the entire city which allow cyclists to load their bicycles onto a bus rack in order to complete their journey: the S53 and the S93, which cross the Verrazano-Narrows Bridge, have allowed a limited number of bicycles since 2015.

As of press time, the MTA is planning to trial bicycle racks on the Bx23 and Q50, with the latter providing a route over the Whitestone Bridge. There are no other known plans for the MTA to expand this much-needed program.

If it were possible to ride for part of a journey and travel the rest of the way by bus, bicycling would be a more feasible option for more New Yorkers, both for commuting and for leisure.

**E-bikes**

Electric pedal-assist bicycles (e-bikes), commonplace in other cities, occupy a strange grey area in New York State law: Because they have motors, they are regarded as Class C limited-use motorcycles and must be registered with the Department of Motor Vehicles, but because they lack the vehicle identification number (VIN) given to actual motorcycles, this cannot be done. Therefore, while it is legal to buy and sell an e-bike, it is not legal to ride it. Over the past decade, bills to fully legalize e-bikes have stalled in the State Legislature, denying the benefits of cycling to a large contingent of New Yorkers would feel they need the option of pedal-assist to make it through a long journey or across hillier sections of the City.
Many misconceptions about e-bikes abound, but Class 1 pedal-assist bicycles, which have a maximum assisted speed of 20 miles per hour with motors under 750 watts, are safe and widely used elsewhere in the United States and around the world. They are particularly useful for older people and those who fear their physical limitations might otherwise rule out biking.

While all e-bikes are classified as motorcycles, Class 1 pedal-assist bicycles are actually far different: these e-bikes operate more like traditional bicycles. And unlike true motor vehicles, they emit no exhaust fumes or toxic pollutants that contribute to New York City’s high asthma rate. By requiring less than 10% of the energy needed to power a sedan per mile, and emitting 90% less pollutants per passenger per mile than the average bus, e-bikes are an environmentally-friendly option to be embraced, not feared. New York City’s lawmakers in the State Legislature must coordinate to finally pass bills fully legalizing pedal-assist bicycles.

**Automated Enforcement**

Automated enforcement has been harnessed by New York City through the use of red light and speed safety cameras, which have been an overwhelmingly effective part of the arsenal against dangerous driving. According to the DOT, speeding has dropped over 60% at locations where cameras have been installed, which reduces the crash risk to bicyclists and pedestrians.

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These cameras are not only effective, but also fair: they record only the speed of the car, not any demographic features of the driver. A ticket costs $50 – well under the fine of other violations – and is only issued when a driver exceeds the speed limit by over 10 miles per hour.

Unfortunately, camera hours and days of operation, as well as the number of school zones that can have a camera in the first place, are strictly limited by state law. While the State Assembly passed a bill that would have increased the number of school zones and eased rules on camera placement before the end of the 2017 session, the State Senate failed to do likewise.

The urgent need for automated enforcement is underlined by continued problems with existing Vision Zero policing in New York City. As detailed in Appendix B, law enforcement is currently not addressing the needs of New York City bikers, and in some cases is worsening conditions for riding and entrenching inequitable situations. Further automated enforcement will tackle dangerous driving
behaviors without needing to rely on the presence of law enforcement, leading to a benefit for all New Yorkers regardless of whether they ride.

**Bicycle-specific local legislation**

There are two initiatives, already tested in other jurisdictions, which New York City can adopt to address dangers at intersections: Allowing bicyclists to proceed on the leading pedestrian interval, and the so-called “Idaho Stop.”

A leading pedestrian interval (LPI) gives a walk signal to pedestrians several seconds before the parallel traffic light turns green. This “head start” helps reduce the risk of crashes by making pedestrians more visible to turning drivers: By the time the driver begins to turn, the pedestrian will already be in the intersection. Hundreds of LPIs have been installed throughout New York City in recognition of the pedestrian safety benefits they provide. However, they also have the potential to protect bicyclists as well, in the same manner.

The urgent need for automated enforcement is underlined by continued problems with Vision Zero policing.

“Right hook” crashes, in which a turning driver hits a pedestrian who is traveling straight, are common and deadly. Bicyclists also report feeling intimidated by motor vehicles, which can accelerate faster than any bicycle, lined up behind them as the traffic light turns green, often becoming aggressive at what they perceive to be bicyclists slowing them down. Allowing bicyclists to go on the LPI’s walk signal, rather than requiring them to wait for the same green light as motor vehicles, would provide that safety-enhancing head start while still requiring bikers to yield to pedestrians. In 2016, City Council Member Carlos Menchaca introduced a bill that would allow cyclists to go on the LPI, but it as of press time it remains laid over in committee.\(^5\)

The Idaho Stop, so-named for the state where it became law in 1982, allows bicyclists to legally treat red lights as if they were stop signs, and stop signs as if they were yield signs. Bicyclists must come to a complete stop, but may then proceed through an intersection after determining there is no cross-traffic with the right of way.

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Again, this provides a crucial head start for bicyclists to avoid aggressive drivers behind them. The year after this new rule was implemented in Idaho, bicyclist injuries fell 14.5%. More recently, Paris adopted a form of the Idaho Stop as part of its initiative to increase bicycling, seeing it as one way to make riding a bicycle more convenient.

New York City should now follow suit. In 2015, City Council Member Antonio Reynoso brought forward a resolution calling upon the State Legislature to pass, and for the Governor to sign, legislation to allow bicycles to treat stop signs and red lights as yield signs, but it has stalled in legislative limbo.

**Family-friendly bicycle laws**

The ultimate measure of whether a street is “safe” for bicycling is, arguably, whether the most vulnerable person on a bicycle can ride without fear of a crash. Children, with their smaller size, poorer judgment of moving vehicles, and developing brains, are legally allowed to ride on sidewalks until age 14 precisely because it has been recognized the streets are too dangerous for them. Their parents, however, do not receive the same dispensation and are at risk of a moving violation or criminal court summons if they do likewise while supervising their children.

When there is no protected bike lane available, parents should not be criminalized for the act of protecting their children. So long as they exhibit due care, adults should be allowed to ride on sidewalks beside children under age 14.

**Immediate Recommendations for the City of New York:**

- Create a timeline and budget for the expansion of Citi Bike across all five boroughs.
- Eliminate the requirement that Motivate provide reimbursement for lost parking revenue.
- Continue to explore the option of direct public funding for Citi Bike expansion.
- Continue to explore opportunities to introduce socially responsible dockless bike share.
- Pass legislation legalizing bicycle LPIs, the Idaho Stop, and the right of parents to ride on sidewalks with young children.
- Create a timeline and plans for the expansion of bicycle parking facilities.

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Conclusion

ew York City leads the world. It’s a statement New Yorkers take for granted. From a bicycle seat, however, the view can be discouraging – and so is the knowledge that other cities are moving further ahead of New York with practical, innovative policies that make their streets more welcoming to bicyclists.

This is unacceptable, and not only as a point of local pride. New York City knows exactly what must be done in order to improve conditions for bicyclists. They knew 20 years ago with the release of the Bicycle Master Plan. What stops progress is a reluctance on the part of officials to shake up the status quo that privileges cars above all other modes.

As the Transportation Alternatives BikeNYC 2020 survey shows, bicycling is convenient, fun, healthy, environmentally friendly, and great exercise. Protected bike lanes make riders feel safe and enhance their transportation options.

The ultimate measure of whether a street is “safe” for bicycling is whether the most vulnerable person can ride without fear of a crash.

Now what New Yorkers need is a full and thoughtful build-out of a protected bike lane network so that biking can be an option for every journey, and every person. Riding a bicycle is no longer only for the young, fit, and fearless. The infrastructure provided for riders needs to match.

Mayor de Blasio has committed to doubling the number of bicyclists in New York City by 2020. At Transportation Alternatives, we are eager for that day to come, but know it can only arrive with the implementation of the policies that advocates have long demanded. We invite the City of New York to use this report as their guide to creating a world-class bicycling city, and welcome further engagement.

The most important thing the city can do, and must do, is radically expand and connect the protected bike lane network quickly and equitably so that riding a bicycle is a realistic and safer option for New Yorkers of all ages, genders, and backgrounds. Then, and only then, will hundreds of thousands more people discover the convenience, fun, and freedom that comes on two wheels – and 8.6 million people will witness the benefits of a world-class bicycle city.
Appendix A: Cycling and Public Health Research – Quantifying the Benefits

As indicated by responses to our survey, fear of injury or death on the road is a major barrier to cycling in New York City. To a lesser extent, many would-be cyclists are concerned about the risk of air pollution to their health if they were to ride on the streets. Perceptions of risk, however, often do not align with actual risk. In reality, a sedentary lifestyle poses significant health risks that are typically not mentioned in the context of cycling, and for every person who switches from a polluting car to a zero-emissions bike, less greenhouse gas is generated, to the benefit of everybody nearby. Numerous studies have found that the health benefits of cycling outweigh the risks by as much as seventy-seven to one, and that after controlling for numerous sociodemographic and lifestyle factors, bike commuters had a lowered risk of cardiovascular disease and cancer than even those who walked. The United States Department of Health also advises that even in polluted air, it is better to exercise than to be sedentary.

Foremost in the recent literature is a study from Columbia University’s Mailman School of Public Health that quantifies the benefits of New York City’s bike lanes. The research team of Jing Gu, Babak Mohit, and Peter A. Muennig found that the construction of bike lanes under Vision Zero cost $2.79 per capita, increased the likelihood of riding a bike by 9%, and produced positive health effects that were more cost-effective than most public health interventions. Impacts included reduced injury and death, promotion of cardiovascular exercise, and reduced air pollution, with the latter demonstrating that even New Yorkers who don’t ride bikes can benefit from the actions of those who do. Installing bike lanes was found to be more cost-effective than traditional approaches to improving health care, including expanding Medicaid and providing private health insurance, indicating that in an extremely divisive and deadlocked national political atmosphere, New York City has the power to impact the public health of its residents through its local transportation policies.


4 Gu et al, ibid.
A 2013 study in the San Francisco Bay area estimated that increasing median daily walking and cycling from 4 to 22 minutes could reduce the burden of cardiovascular disease and diabetes by 14%. While traffic injuries could increase, the net benefits would outweigh the disadvantages, resulting in a reduction of 2404 premature deaths per year. If the same results held for New York City, there would be an estimated reduction of about 2912 premature deaths per year through both this direct increase in active transportation and the associated reduction in air pollution. Models from urban New Zealand estimate that shifting 5% of the distance traveled by car to cycling would reduce transportation-related greenhouse gas emissions by 0.4%, and eliminate six deaths from air pollution-related causes on top of 116 fewer annual deaths linked to sedentary lifestyle. Benefits were comparatively greater for disadvantaged ethnic minority groups. Assuming a similar effect would hold for New York City, we could expect 389 fewer deaths annually—and seeing how cycling risk has decreased as riding increases, these deaths would not be offset by collision casualties.

When Odense, the third-largest city in Denmark, invested 20 million kronor (about $3.2 million) in cycling initiatives over four years as part of its designation as National Cycle City, they achieved a 20% increase in the


Most popular destination for CitiBike riders:

82% errands & appointments
71% social life
61% commuting
53% get to another transit system

Results of the BikeNYC 2020 survey
number of people cycling (creating a total mode share of 25%) and reduced injury crashes by 20% as well. More than half of new cycling trips were journeys that would have otherwise been made by car. The health gains from cycling resulted in an estimated savings of 33 million kronor (about $5.2 million), and an estimated 500 total years of lifetime were added to the residents of Odense. New York City has about 43 times the population of Odense, but only two-and-a-half times more land area, and many of the Odense initiatives could be scaled up without massive costs – and they would ultimately save money in long-term health gains.

The UK’s National Heart Forum estimated that if all people whose activity level was “sedentary” or “light” increased to “moderate,” without any other changes, the incidence of coronary heart disease – the biggest killer of New Yorkers, and the second leading cause of death in the UK – would fall by about 10%. With 16,311 New Yorkers having died of heart disease in 2014, a similar drop would mean approximately 1631 lives saved per year, and

7 http://arkiv.cykelviden.dk/filer/cykel_inet.pdf
8 Cavill and David, ibid.
biking could play a major role in increasing physical activity with the city as a gym if more protected lanes were available to help beginners become more comfortable starting out.

Most of the research looking at the health benefits of cycling has been related to cardiovascular disease, of which inactivity and associated excess weight is a major risk factor. However, studies from Germany and China also indicate relationships between biking and reduced cancer risk, potentially through reduced body mass index. In Germany, pre-menopausal woman who rode bikes frequently and intensely showed a lower incidence of breast cancer.\textsuperscript{10} Shanghai bicycle commuters had significantly lower rates of colon cancer than their peers with less-active ways of getting to work, even as the incidence of this disease has grown rapidly in the city.\textsuperscript{11} Another study from Shanghai, specifically looking at women with no history of cardiovascular disease or cancer, found that frequent cyclists were at 20% to 50% lower risk of mortality than other women during the study period.\textsuperscript{12}

Numerous additional studies could be cited to make the case for the benefits of cycling, and research continues to attempt to accurately quantify the health impacts of cycling as part of an active lifestyle. The unique conditions of New York City, and the fact that health is the confluence of a variety of factors which cannot all be controlled in a lab setting, make it difficult to put an exact price on the health benefits of riding a bike or predict any individual’s lifetime outcomes. However, evidence strongly suggests that building protected bike lanes is a cost-effective way to facilitate public health improvement.


Appendix B: Law Enforcement

Disturbingly, we have found evidence of the NYPD behaving in such a way as to not only work against Vision Zero goals, but also to discourage biking in a manner that impacts communities of color more than others.

The actions of the NYPD routinely send the message that cyclists are responsible for their own deaths. In the aftermath of fatal crashes, we continue to see the NYPD breaking with protocol to speculate to the press about the causes of the crash before an investigation has taken place. These comments typically assign blame to the cyclist, who, being deceased, cannot speak in his or her defense. This adds insult to injury for grieving families, influences the public to see cyclists as irresponsible and unlawful, and preemptively exonerates dangerous drivers. Furthermore, frequent reports of crackdowns on cyclists in the days after these crashes show the NYPD is failing to focus on the dangerous driver behaviors that kill and maim people, instead going for the lower-hanging fruit of issuing tickets for not having lights or a bell on a bike. These crackdowns do little to improve street safety, because they do nothing to address the cause of most fatal crashes: dangerous driving.

In general, enforcement of motorist offenses against cyclists is inconsistent, with private vehicles often found blocking bike lanes with impunity. Worse, the NYPD is a contributor to road danger: patrol cars are frequently spotted parked in bike lanes, forcing cyclists into the path of motor vehicles.

The racial biases in policing on display across America are sadly also seen in New York City when it comes to aggressive enforcement against cyclists. Specifically examining criminal summonses for biking on the sidewalk issued in 2016 and the first half of 2017, disparities in policing become evident: While precincts that have a majority Black and Latino population cover about 48% of the city’s total population, police in these areas issue 71% of c-summonses for sidewalk riding. C-summonses are more serious than moving violations, which police have had the option of issuing since 2014. The more punitive approach shown in communities of color is particularly concerning as it indicates harsher punishments are being chosen when a simple moving violation would have sufficed. Heavy-handed policing of a minor infraction, in addition to being discriminatory, may have a chilling impact on people choosing to ride in

Precinct populations are available at http://maps.nyc.gov/doitt/nycitymap/
these precincts, and a loss of a transportation option can easily lead to a loss of economic opportunities and basic freedoms that residents of less-punitively-policed precincts take for granted.

Many violations by cyclists can be directly linked to the lack of proper bike infrastructure. Many cyclists who ride on the sidewalk do so because the street is simply too dangerous, full of drivers who pay no attention to the rules of the road or even actively intimidate riders through aggressive driving. It is not a case of bikers thinking rules shouldn’t apply to them – rather, the rules that fail to recognize the fundamental truth that bikes are not cars can actually make situations more unsafe by forcing a cyclist to choose between the risk of a ticket or c-summons and the risk to life and limb. With 65% of cyclist deaths in New York City, and 89% of deaths and serious injuries, happening at intersections, it is logical to examine changes in traffic laws applying specifically to this section of the road. In the meantime, the NYPD should not be contributing to road danger through targeting of cyclists.

If the NYPD are to be partners in Vision Zero and the wider movement for safer active transportation, then they need to show a greater effort towards ending the behaviors within their own ranks that put cyclists at risk of injury or death and which treat New Yorkers inequitably based on who they are and where they live.
Credits

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