2013-12-09

Bikes and Boston: The Emergence of the Bicycle in the City of Boston. Recommendations for Improving the Safety of Bicyclists at Boston University.

Lopez, Daniel A.

http://hdl.handle.net/2144/7131

Boston University
Bikes and Boston: The Emergence of the bicycle in the City of Boston

Recommendations for Improving the Safety of Bicyclists at Boston University

Daniel A. Lopez

May 2013

Boston University Political Science

Under the guidance of Professor Christine Rossell
ABSTRACT

In the last few, accidents involving bicycles in the City of Boston and the Boston University Campus have significantly increased. During the fall 2012 semester at Boston University, two students who were involved in accidents while riding their bicycles were killed in separate incidences. These tragedies, along with the fact that over 600 incidences have occurred in the City of Boston in the last year alone, suggest that significant safety measures to protect bicyclists are needed. Due to the interdependent nature of transportation as a whole, it is my opinion that significant measures which protect bicyclists will also have positive benefits in protecting pedestrians and motorists as well.

This paper proposes five policies as a means to improving the safety of bicyclists, that is, caution signs, pavement markings, and reflectors; reduced speed limits; barriers; bicycle stoplights; and intelligent transportation systems. To ensure that these policies are effective, a strong implementation phase that addresses enforcement and education is needed. Boston University already does a great job in addressing these two areas; however, the University needs to adapt their plans for enforcement and education to highlight any adopted policies.

Overall, the adoption and implementation of these policies can help to reduce an issue that has become more significant in the last three years – a high number of bicycle-related accidents and a lack of bicycle safety measures. Boston University has the opportunity to pioneer new innovative bicycle safety measures on its campus, which, in turn, can lead to more significant bicycle safety measures for the City of Boston as a whole.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>4</td>
</tr>
<tr>
<td>GOAL OF THE PAPER</td>
<td>4</td>
</tr>
<tr>
<td>BICYCLING IN BOSTON/THE BU CAMPUS</td>
<td>5</td>
</tr>
<tr>
<td>INSTITUTIONAL – AND CULTURAL – FAILINGS</td>
<td>6</td>
</tr>
<tr>
<td>TRANSPORT. LAWS, INITIATIVES, AND LEGIS. IN BOSTON/MA</td>
<td>11</td>
</tr>
<tr>
<td>TRANSPORTATION INITIATIVES AT BOSTON UNIVERSITY</td>
<td>16</td>
</tr>
<tr>
<td>PROPOSED POLICIES</td>
<td>17</td>
</tr>
<tr>
<td>FEASIBILITY AND IMPLEMENTATION</td>
<td>25</td>
</tr>
<tr>
<td>CONCLUSIONS</td>
<td>31</td>
</tr>
<tr>
<td>APPENDICES</td>
<td>32</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>50</td>
</tr>
</tbody>
</table>
INTRODUCTION

During the fall semester of the 2012-2013 school year, five bicyclists in the city of Boston had been killed in crashes – two of which were Boston University students near or within campus grounds. As a result of these deaths, and general public dismay at the multitude of hazards which students and faculty face every day in their commute to campus, many groups have begun to question our current policy on bicycle, pedestrian, and vehicle safety and call for new safety regulations which will keep each of the former groups safe in their daily commute. With considerable attention on bicycle, pedestrian, and vehicle safety, especially within the Boston University campus, many questions arise: is transportation safety a legitimate issue within the city? If so, what are the current laws surrounding these key groups? Also, what ways have the city of Boston and state of Massachusetts sought to combat this issue, both historically and currently? Finally, what other policies can be enacted, if need be, to help ensure the safety of motorists, bicyclists, and pedestrians, within and surrounding the Boston University campus?

GOAL OF THIS PAPER

This proposal seeks to examine shortcomings of the city of Boston policy on bicycle, pedestrian, and vehicle safety – especially in their application for the Boston University campus; to assess current initiatives/projects and propose new policies to provide a safer environment to walk, bike, or drive; and to provide policy recommendations to the Boston University campus in hopes that these policies may be implemented with the potential for adoption by the city of Boston as a whole. In considering the primary goal for my policy recommendations, I assert that the improved safety for bicyclists is the most important consideration in this case. In making this claim, it is clear that pedestrians on the Boston University campus – due to improved walking conditions from recent campus initiatives – and vehicles – due to obvious physical superiority and clear legislative
guidelines from local and state governments – are currently more protected than bicyclists. Additionally, it is my opinion that policies geared towards improving the safety of bicyclists will have positive externalities which will improve the safety of pedestrians and drivers.

**BICYCLING IN BOSTON AND ON THE BOSTON UNIVERSITY CAMPUS**

According to the most recent crash report by the Massachusetts Department of transportation, there were over 110 reported crash incidents involving bicycles in 2010 – not including the potential incidences which were not reported by local, transit, and state authorities.¹ Since 2010, this number has increased significantly; recently, Boston Bikes, the city’s cycling initiative, reports that from January to November of 2012, there were over 579 bicycle-related incidents in the city that required Emergency Medical Services.² In regards to the to the Boston University campus, there have been over 50 incidences involving bicycles from Commonwealth-Babcock to Commonwealth-Beacon in the last year alone – most of which, have occurred at busy intersections.³

Moreover, bicycle ridership increased 122% from 2007-2009 and continues to increase with ambitious public transportation projects like the city of Boston’s new “hubway” system which allows individuals to rent bikes and ride them to their destination while dropping off the bike at a hub – or bike stop – close to their destination.⁴

Considering our neighbors across the river in Cambridge – which has consistently been ranked one of the top bicycle friendly places in the US – and other cities across the US with strong transportation records, it is evident that the city of Boston does have a serious policy failing in

---

³ Ibid.
⁴ Ibid.
transportation safety, especially in regards to pedestrians and bicyclists, which is affecting important areas such as the Boston University campus. However, prior to evaluating Boston’s current initiatives and policies regarding transportation safety, it is important to explore the problem more deeply.

**INSTITUTIONAL – AND CULTURAL – FAILINGS**

When examining the city of Boston as a whole, it is clear that there are a multitude of factors feeding into the failure of providing a safe environment for bikers, pedestrians, and motorists – too many for this proposal to accurately account for and provide feasible solutions towards. In fact, though Boston has seen almost 600 bicycle related accidents in the last year, it is still unclear what the primary causes of these accidents has been. As a result, in response to the death of Chris Weigl, a Boston University student who died hitting a semi-trailer truck, Interim Director of Boston Bikes Kris Carter recently testified in front of the Boston city council that the city is “now committed to carrying out the first thorough analysis of Boston Police narrative reports for bike crashes ever completed in the city.”

Carter went on to state that the analysis would cover 2009-2011 and will help give transportation planners an important step towards uncovering the cause of crashes.

Accordingly, for the sake of narrowing the scope to an environment which has endured many of the effects of Boston’s shortcomings in transportation safety, the Boston University campus provides a great sample of some significant problems that need to be addressed. The two biggest problems that need to be addressed within the Boston University community, the evidence suggests are failings within the institutions themselves – safe roads with minimal hazards, clear stop signs and stoplights, and other institutional functions – and cultural failings – the lack of

---

accountability, humility, and safety practiced by all groups and parties, more specifically, bicyclists, pedestrians, and motorists, when using the roads and the sidewalks. Additionally, it is important to note that neither of these failings is mutually exclusive – both directly and indirectly contribute to one another as well as additional problems on the roads within the Boston University campus, making it an unsafe place for people to walk, bike, or drive.

Institutional Failings

In an editorial opinion to the Globe newspaper, a concerned citizen provides this description of the most important street of the Boston University campus – Commonwealth Avenue. Robinson states:

“Commonwealth Avenue is a death trap. All on the same street, there is a major university campus with classroom buildings on either side, a major east-west transportation artery, one of the most heavily traveled overground transit lines, one of the most cycled routes in the city, and a hub of restaurants and shops requiring delivery services. And I do not even mention Red Sox games, when Comm. Ave. becomes the Thunderdome.”  

Referring to Robinson’s statement, the evidence suggests that Commonwealth Avenue, one of the biggest, busiest streets in Boston, is hazardous for pedestrians, bikers, and vehicles. Considering the multitude of potential dangers that the author raises, it is beneficial to go through hypothetical dangers each group – bikers, pedestrians, and drivers – face while travelling down Commonwealth. Figure 1 provides a visual representation on how the lanes within Commonwealth Avenue are organized.

---

From a driver’s perspective, traffic tends to flow at anywhere from 35-50 mph on Commonwealth Avenue while cars continually shift between two narrow lanes. In the midst of these high speeds, due to the density of the street, many cars make sudden stops to avoid hitting aggressive pedestrian jaywalkers or bicyclists in narrow, indistinguishable bikes lines who may have been hidden in their blind spot or sped past a red light, while also avoiding other cars who may be looking to make a turn, find a parking spot, or may be stopping for traffic.

From a pedestrian’s perspective, Commonwealth Avenue is a very dangerous place to walk. In order to cross the street one needs to look left for a few moments to ensure cars in both lanes are stopped, check the bike lanes to make sure bikes are not flying down the road – many times which pedestrians have to guess whether to continue walking or to stop in the middle of an intersection because many bikers do not stop for red lights. Once at the middle portion of the street, pedestrians also have to dodge the masses of people getting off the public transportation system called the T.
while avoiding the train and making it to the other side of the tracks so that they may once again check for cars and bikes and proceed to walk across the second portion of the street. Add into this equation the fact that most pedestrians on commonwealth avenue are aggressive walkers and do not pay attention to the walk-stop signs and, anyone who chooses to do so, while most likely be pushed out of the away by eagerly anticipating individuals who are in a rush to make it across the many obstacles on commonwealth avenue within 30 seconds or however long the lights permit. Ultimately, all of these hazards make it very dangerous for pedestrians on Commonwealth Avenue because, in many incidents, they are involved in accidents with cars, the T, and bicycles – two of which, the T and cars, are more protected than a pedestrian.

Finally, it is evident that bikers are encountering dangerous conditions when riding down Commonwealth Avenue also. Bikes have the capacity to go nearly as fast as cars do when going down the street. Most bikes tend to stay within the very narrow, indistinguishable bike line which has a parking lane – and the potential for oblivious drivers to open a car door and take out a biker – to the left and the high speed car lanes to the right. Though bikers are allowed to ride in main car lanes, few bikers utilize that advantage because of high speed, aggressive drivers. Finally, bikers experience many difficulties at intersections: first, bikers have to look out for drivers making a right turn – which cuts into the bike lane in order to successfully do so – and also for jaywalking pedestrians who are generally oblivious to the existence of bikers until they get hit.

Ultimately, the combination and high density of these three groups within a really confined street makes Commonwealth Avenue a hazardous, high potential area for accidents involving bikers, pedestrians, and drivers.
Cultural shortcomings

Along similar lines as the institutional policy failings on Commonwealth Avenue which make it a dangerous place to travel, it is evident that there are some cultural aspects which have fueled this already hazardous place. In a recent article in BU today, which describes reactions of bicyclists during a police checkpoint where they handed out tickets and distributed helmets, one cyclist responds that “they do not see them [police] trying to educate motorists on how not to kill us [bicyclists].”7 This tends to be a common theme residing within many bikers who feel that that motorists and pedestrians neglect the traffic rights of bikers when on the roads. For example, Leila Haery asserts that while bikers do not acknowledge all the traffic laws…officers do not stop delivery truck drivers who block bike lanes and or bus drivers who aggressively cut off cyclists.8 As a result of the disregard that pedestrians and drivers take when treating bikers on the road, BUPD officer Scott Pare suggests that “some cyclists are driving a little too erratically, and they’re taking too many chances, driving through red lights, driving on sidewalks, and just basically not following the rules of the road.”9

Pedestrians have also become bolder when walking on the always busy Commonwealth Avenue. Many pedestrians will walk in the middle of traffic, walk across the street even during a green light, and also cut off bikes in their path to the sidewalk. A BU today article describing Public Safety week states that “not only do pedestrians often not wait for a walk signal; they listen to iPods or read and write text messages while crossing the street.”10 Accordingly, this indifference on the part of pedestrians, who have a falsified perception that they will not be struck by a car or bicycle,

---

8 Ibid.
9 Ibid.
leads to further unawareness because pedestrians are easily distracted by electronics or are busy multitasking instead of paying attention to the roads.

Finally, drivers tend to also drive very aggressively on Commonwealth Avenue – with little regard to following traffic laws that apply to bikers and pedestrians. At the expense of many bikers and pedestrians, drivers often times take high risks while in their vehicles such as driving through yellow lanes instead of preparing to stop; parking inside the bike lane; making a right turn without looking for bikers or pedestrians; and driving at faster speeds than allowed on Commonwealth Avenue.

Overall, the evidence suggests that the problem is more than just institutional shortcomings – it is a cultural problem in which each group – bikers, drivers, and pedestrians – disregards the rights of the other groups when traveling. To quote a biker who was interviewed in BU Today, “everyone around here just pushes the boundaries – pedestrians, bicyclists, cars; it is just a morass of ridiculousness.”

TRANSPORTATION LAWS, INITIATIVES, AND LEGISLATION IN BOSTON AND MASSACHUSETTS

At the state and city levels, policymakers have recently emphasized the importance of adding comprehensive bicycle safety law as a means to bolster safety for all three groups, that is, bikers, drivers, and pedestrians. Accordingly, most of the laws, initiatives, and legislation focused on in this section deal largely with bicyclists for two reasons; first, laws in regards to drivers and pedestrians are somewhat universal in Boston, Massachusetts, and the country as a whole. Drivers are expected to follow Massachusetts driving laws and obey road signs and have to pass a learner’s permit test, practice driving for six months or more and pass a test prior to being awarded a license – which

---

shows mastery – or at least familiarity – with Massachusetts driving laws. As far as pedestrians are concerned, they are expected to follow all road signs in accordance with the law and use common sense.

Second, with the adoption, implementation, and enforcement of bicycle safety regulations, it is evident that all three groups will benefit from more cautious bikers. It is clear that stronger enforcement needs to be implemented across all groups; however, with bikers – considering they are in a grey area between pedestrians and drivers – the evidence suggests that clearer bicycle laws combined with strict enforcement will lead to a safer environment for all groups. Accordingly, here are the most recent, significant laws, initiatives, and legislation within the city of Boston and the State of Massachusetts:

**Boston Bikes**

In 2007, long time Boston Mayor Tom Menino launched the Boston Bikes initiative as a part of the Boston Public Health Commission in response to many emergency related incidents involving bicyclists. Boston Bikes acts as a think tank, advocacy group, and a general human services department by provides resources to bicyclists; and advocating for policies by providing information to key groups and sponsoring/developing important studies which assist lawmakers in legislative adoption. Since its creation in 2007, bicycle ridership in the city has more than doubled and the evidence suggests that bike ridership will continue to grow with the development and successful implementation of the Hubway bike-sharing system.

Two prominent policies/initiatives which Boston Bikes is currently working on are the Boston bike network and a crash cause report in response to the death of BU student and bicyclist

---

Chris Weigl.\textsuperscript{13} Simply put, the Boston bike network is a developmental policy favored by both Boston Bikes and Mayor Menino which would create an interconnected network of bikeways which would encourage bike ridership and, theoretically, reduce accidents between cars and bicycles.\textsuperscript{14} Along similar lines, Boston Bikes has been collaborating with other advocacy groups to create a crash cause report – the first thorough bicycle accident incident report. By creating this report, Boston Bikes hopes to be able explain the primary cause between accidents involving bicyclists, and, as a result, try to create policies which would ameliorate these causes.

\textbf{MassBike “Same Road, Same Rules” Campaign}

At the state level, the Massachusetts Bicycle Coalition or MassBike is a notable non-profit interest group which has contributed to many of the bike-friendly legislation, plans, and development projects occurring in the state today. MassBike has been involved in numerous projects including training new police officers on bicycle laws; lobbying for new bicycle racks near the MBTA; creating more highways and roads that are bike-friendly; and lobbying for the eventual passage of the Bicyclist Safety Bill (SB 2573).\textsuperscript{15} Briefly, the Bicyclist Safety Bill outlined the rights and responsibilities and bikers while on the road including the right to “ride your bicycle on any public road, street, or bikeway in the Commonwealth, except limited access or express state highways where signs specifically prohibiting bikes have been posted.”\textsuperscript{16}

Accordingly, many of the cycling policies that Boston and other localities have today are due to efforts of MassBike and others at the state level. In fact, MassBike recently launched the ‘Same Roads, Same Rules’ initiative which seeks to increase awareness and provide safety tips as for bikers

\begin{footnotes}
\item[14] Ibid.
\end{footnotes}
and motorists. The campaign looks to root out the aggressive culture that drivers, bikers, and pedestrians practice when on the road by providing safety tips to these groups so they can learn to coexist in the same spaces. More specifically, the campaign has a website and groups continually hand out flyers with safety tips when in environments with bikers, drivers, and pedestrians (Appendix A).

**SB 2573: An Act Relative to Bicyclist Safety**

After eight years of delays by state representatives, the Bicycle Safety Bill (SB 2573) was passed into law in 2007. The bill itself is one of the most significant, comprehensive pieces of legislation concerning bicyclists in recent history. At a basic level, the bill outlines the rights and responsibilities of bikers while calling for police training on new bicycle laws to provide accountability during its implementation. More specifically, MassBike states:

“[the bill] adds police training on bicycle law and dangerous behavior by bicyclists and motorists; explains how a motorist should safely pass a bicycle; explains how a motorist should safely make a turn in front of a bicycle; makes “dooring” (opening a car door into the path of a bicycle or other vehicle) subject to ticket and fine; permits bicyclists to ride two abreast when it does not impede cars from passing; and adds legal protections for bicyclists who choose to ride to the right of other traffic.”

(Appendix B)

All in all, by clearly outlining and defining the rights and responsibilities of bicyclists, it is evident that this law can support further initiatives and policies by interest groups, the city of Boston, or other key transportation actors.

---


**Vulnerable Road Users Bill**

Along similar lines, MassBike and others have recently been advocating in the state legislature for the Vulnerable Road Users bill. At a basic level, the bill encourages motorists to exercise more caution when operation around vulnerable road users, educate motorists to operate more safely, and will provide law enforcement with additional tools to protect vulnerable road users. This legislation differs from the Bicyclist Safety Bill in the sense that it looks to increase awareness of bicycle and pedestrian presence to drivers and raise the penalties for negligence by drivers as a means to providing a safer environment for bicyclists and pedestrians. This piece of legislation is aimed to raise driver awareness of bicyclists and make sure that those motorists that harm us are held accountable.19 *(Appendix B)*

In addition increasing driver awareness to vulnerable road users, the bill also brings accountability by providing means to punish those who break the law. In order to bring accountability and coerce drivers to exercising more caution, the bill, if passed, would raise the fines associated with harming or killing vulnerable road users; require a traffic safety class and community service to raise awareness of interactions between motorized vehicles and vulnerable users; and it will correct language that hampers the prosecution of motorists who negligently or recklessly cause injury or death to vulnerable road users.20

It remains to be seen whether this bill will become enacted into law or not; however, if enacted, this would become the second largest piece of legislation regarding transportation safety within the last ten years.

---


20 Ibid.
TRANSPORTATION INITIATIVES AT BOSTON UNIVERSITY: COMMONWEALTH AVENUE IMPROVEMENT PROJECT

From 2006-2008, Boston University, in conjunction with the Massachusetts Highway Department (MHD) and the City of Boston, embarked on a construction project was designed to improve pedestrian safety on the Boston University Campus. According to Boston University, “the project’s enhancements will include: improvements and modifications to sidewalk and crosswalk widths; the creation of neck downs at intersections to shorten pedestrian crossing distances; and traffic calming measures designed to reduce vehicular travel speeds and improve overall pedestrian safety.” Some additional measures that Boston University would implement in this policy were the installation of new traffic signaling, pedestrian access, and articulated crosswalks; expansion of MBTA station platforms so more pedestrians can wait safely without impeding traffic flow. Phase I of the project, which encompassed the areas of Kenmore Square to the Boston University Bridge, was successfully completed in 2008.

In examining the primary goals of this improvement project, it is clear that bicycle safety was not a top consideration in the development, adoption, or implementation of this project. None of the goals listed by Boston University show any sort of measures that would make the Phase I area of commonwealth avenue more safe for bicyclists and more safe for pedestrians/vehicles to avoid bicyclists. Though there is a bike lane on commonwealth avenue, Craig Hill, Vice President of Auxiliary Services notes that this was not a well-developed plan to incorporate bikers on Commonwealth Avenue and instead was a last minute plan during the implementation stages of Phase I.

---

22 Ibid.
24 Meeting with Craig Hill – Vice President of Auxiliary Services at Boston University.
However, it is apparent that this is not entirely the fault of planners or Boston University for not developing more comprehensive proposals for bicycle safety during the formulation of the Commonwealth Avenue Improvement Project Phase I. With the development of Boston Bikes by Mayor Tom Menino in 2007 along with other conditions, it is clear that the substantial increase in bicycle ridership in Boston is a relatively recent phenomenon; therefore, developers could not have anticipated that bike ridership, especially in a city that endures snow and inclement weather for three-five months out of the year, would see the percentage of bicyclists doubling in the last five years alone.25

Additionally, since the recent tragedies involving bicyclists on Boston University’s campus along with an increase in bicycle-related accidents in Boston generally, Boston University administration has halted their implementation of the Commonwealth Avenue Improvement Project Phase II – which is intended to encompass the areas from the Boston University Bridge to Packard’s Corner – until some comprehensive bicycle safety measures can be added to the project. In adding some measures which can improve the safety of areas included in both Phase I and the eventual Phase II, it is clear that this policy recommendation can assist in providing effective bicycle safety measures to be incorporated into Phase II of the Commonwealth Avenue Improvement Project.

PROPOSED POLICIES

Accordingly, to meet the primary policy goal of this paper – improving the safety of bicyclists – it is clear that five policies would help in achieving this goal, that is, caution signs, pavement markings, and reflectors; reduced speed limits; barriers; bicycle stoplights; and intelligent transportation systems.

Caution signs, pavement markings, and reflectors

In a recent article published by BU Today, the Boston University Bicycle Safety committee recommended three policies in order to improve transportation safety, especially for bicycles, on campus grounds. Briefly, the committee recommends signs, pavement markings, and reflectors as a means to improving safety on campus.

According to the committee, signs will “designate a “High bicycle and pedestrian activity zone,” and instruct drivers to “Share the road” and “Yield to bicycles when turning right.” Other signs will post a 25-mile-per-hour speed limit. Part of the stretch had been posted for 30 mph.”26 Notice also that each of these signs is yellow instead of white – this is due to the fact that none of these are actual law but instead act as a caution for bikers, drivers, and pedestrians alike. Listed below are examples of the signs that the committee has tentatively proposed for installment on Commonwealth Avenue and on other streets within campus grounds:

![Figure 2: Proposed caution signs from the Boston University Bicycle Safety Committee; source: bu.edu/today](image)

---

Along similar lines, the committee also recommends adding pavement markings and reflectors to bike lanes in order to make drivers and pedestrians aware of the presence of bikers within those lanes. More specifically, the committee states that “the existing bike lanes…will be painted at intersection crossings with skid-resistant, high-visibility green paint, and white bike-shared-lane markings will be added within the green paint at busy intersections and at long crossings. The width of the bike lanes’ edges will be increased to six inches, from…four inches.” \(^{27}\) In regards to the reflectors, the committee recommends that “highway reflectors, recessed into the pavement, will be installed along the outside of bike lanes between intersections, and more closely spaced before each intersection crossing.” \(^{28}\) Figure 3 illustrates the committees proposals along with measurements on the street compared to within an intersection:

![Figure 3: Illustration of an intersection with proposed pavement markings and reflectors; source: bu.edu/today](image)

\(^{27}\) Ibid.

**Reduced Speed limits**

Though the speed limit reduced was not one of the official proposals by the Boston University bike safety committee which recently released its recommendations for improved bike safety on Commonwealth Avenue, many members of the committee are pressing for its adoption. In Massachusetts, the speed limit for ‘thickly settled areas’ or business districts is 30 mph unless otherwise posted. 29 Recently, David Watson of MassBike.org stated that “reducing the speed limit from 30 to 25…will increase safety for everyone by giving drivers more time to look around and react to the people around them, and will help reduce the severity of injuries in crashes.” 30 Simply put, the likelihood that a pedestrian or bicyclist survives an accident with a vehicle traveling a 25 mph is higher than with a vehicle traveling at 30mph.

**Barriers**

Recommended by some members of the bicycle safety committee and commonly used in some of the world’s best cities for bicyclists, barriers provide a physical safety buffer for bicyclists and drivers. Barriers take many different forms depending on the other physical environments/conditions of the city; however, as Steve Miller, a Harvard School of Public Health administrator, notes specifically for the case of Commonwealth Avenue, “better [safety measures] would be protected bike lanes, created either by installing rubber posts, removable during snow season…or by a curb separation.” 31 Additionally, some cities have also sought to implement barriers by placing the parking lane to the left of the bike lane and using the parking meters as a physical barrier in of itself. Listed below are some common types of bike lane barriers:

---

31 Ibid.
Accordingly, though many praise increased safety that comes with bike lane barriers, these barriers are generally very expensive for cities and other entities and they are still not able to solve the “right lane dilemma”, that is, how to keep bicyclists and pedestrians safe when cars make right turns and inevitably pass through the bike lane to do so.

**Bicycle stop lights**

Another solution that many localities and states have begun implementing to increase bicyclist safety on the roads are bicycle stop lights. A relatively recent innovation, bicycle stop lights are essentially stop lights that are specifically created for bicycles. Usually, these lights are installed near a pedestrian crosswalk light or a general vehicle traffic stop light. Many proponents of these stop lights praise them because they help to clarify when bikes are allowed to ride at an intersection. Conceptually, there are specific lights which signal a pedestrian to walk or a vehicle to go – it would make sense that there should also have a light signaling a pedestrian to ride. Recently, USA Today reports that 16 cities (including Austin, Denver, Minneapolis, San Francisco, Seattle and Washington D.C) in the U.S. have begun to implement bicycle-specific traffic stoplights within their cities.\(^3\)

Additionally, many have praised Bike traffic signals because they “accommodate cyclists better than conventional traffic signals. Providing sufficient time to clear the intersection, ensuring activation of

---

the traffic signal, and reducing conflict with motorized traffic...”33 Stoplights created exclusively for bicycles help to solve this issue by providing riders with a clear set of lights to follow at intersections, make clear to drivers and pedestrians that bicycles are frequent on Commonwealth Avenue, and provide accountability to bikers who continue to run through the intersection. While opponents have responded that bicyclists should just respond to the same lights as automobiles, it is important to note that the current status quo has emphasized this approach and we continue to see accidents and many miscommunications on behalf of bicyclists as a result. By implementing these lights, it makes it clear to both the bicyclist and the driver when a bicyclist is permitted to proceed. The physical presence of these stoplights, in of itself, I would argue, also make it clear to drivers that the bicyclists are a respected members of the road and need to be treated as such.

Figure 5: Types of bicycle stoplights

**Intelligent Transportation Systems**

Additionally, my last proposal looks to take technology that has been implemented in various ways within streets of metropolitan areas and also to help avoid accidents within industrial settings such as warehouses. According to the United States Department of Transportation, some infrastructure-based Intelligent Transportation System (ITS) technologies have been used in an innovative way to provide better-quality intersection safety information to entering traffic compared

---

to traditional sign and marking enhancements. Briefly, stop controlled intersections and infrastructure-based Intelligent Transportation Systems can be defined as innovate ways in which localities incorporates interactive technology such as audio or interactive visual signals (in addition to stoplights) to warn drivers, pedestrians, and others of potential hazards at an oncoming intersection. ITS technologies are being used in innovative ways to help improve the safety at stop controlled intersections. ITS technologies include enhanced warnings for: drivers who may enter an intersection; drivers who are approaching a stop with a high trajectory speed which may run the risk of running a Stop sign; drivers/pedestrians who are speeding within an intersection; and pedestrians who are not aware of oncoming traffic.  


**Figure 7: Actual Speed Feedback Sign**

**Figure 8: “Look for Traffic” Sign – Both arrows flash when traffic is approaching**

Figures 7 and 8 provide some examples of ITS technologies being used in the United States currently. Figure 7 shows a speed feedback sign which helps to inform drivers of their speed so that they will slow down if needed. Figure 8 is a useful intersection sign which can help to make drivers, pedestrians, and bicyclists aware of oncoming traffic on blind spots within intersection; the arrows flash when traffic is coming from perpendicular lanes of an intersection.
Accordingly, a contemporary type of ITS technology which can be effective on Boston University’s campus in protecting bicyclists and pedestrians are Intersection Cross-traffic Systems. Intersection Cross-traffic Systems (ICSs) are used primarily to avert accidents between fork-lifts and people within warehouse settings. More specifically, ICSs warn pedestrians of vehicle traffic inside industrial facilities by the use of sensor, visual and audible alarms. Sensors monitor up to 4 directions of an intersection for oncoming vehicle traffic. Once the traffic is detected, visual and audible alarms activate to warn pedestrians of approaching traffic and a 360 degree mirror offers extended visibility to the forklift driver.

![Figure 9: Censors and alarms on an Intersection Cross-traffic System (ICS)](image)

**Figure 9: Censors and alarms on an Intersection Cross-traffic System (ICS)**

Figure 9 provides visuals for the type of devices that are installed in warehouse intersection to help avert any pedestrian-forklift accidents. To the left are types of censors that some ICSs use – in this case, a 360 censor like the one shown above would be ideal for traffic conditions. Towards the right are types of visual alarms that ICSs use to signal drivers of oncoming traffic. In this instance, a visual which encompasses both bicyclists and pedestrians would need to be created.

Some other considerations with ITS technologies are that they are expensive in comparison to the other proposals mentioned; on average, installation of ITS technologies (such as the ICSs)

---


range from $15,000 to $35,000 dollars. Second, studies on the effects of this technology are limited currently – policymakers speculate on their effectiveness in comparison to traditional warning signs; however, no significant quantitative studies are currently available.

FEASIBILITY AND IMPLEMENTATION

In the previous section, I proposed five infrastructure changes designed to accomplish one primary goal: increase safety for bicyclists. It is evident that by gearing policies towards bicyclists – a group which have been neglected recently – there will be positive externalities for the safety of pedestrians and safety and liability concerns with drivers. However, it is important to note that these policies are not going to adopt themselves nor does adoption necessarily mean that they are effective – strong, clear implementation is also needed. This section will address concerns with both of these limitations, that is, the feasibility and implementation of one, some, or all of these infrastructural policies. By addressing concerns associated with feasibility and implementation, in addition to increasing the likelihood that they will succeed, these two areas address an area which the policies in of itself cannot fix – cultural shortcomings in the current status quo. While these infrastructure policies may help to solve institutional shortcomings in bicycle, pedestrian, and vehicle safety, they cannot address any sort of cultural shortcomings without addressing the feasibility and implementation.

Feasibility

First, in order to adopt one or all of these expensive, necessary infrastructural policies, it is important to gather support from key groups involved in this issue, especially those who might provide resistance. Assuming that the administration at Boston University is willing to adopt some of these policies already, due to bad press and a general concern for the safety of their students, it
now becomes important to convince two key groups – the City of Boston and the affected community, especially, surrounding businesses.

First, in looking to rally support for the adoption of these policies, it is important to have the support of administration from the City in Boston – including the office of Mayor Menino and Boston Bikes. Initially, considering the amount of bicycle-related incidents that have happened in City and on the Boston University Campus this year, it is evident that timing for these policies is crucial – the issue has been in the spotlight this school year. The City of Boston has become increasingly more bike friendly too considering the installation of the Hubway bike system. However, it is also important to try and find ways to appeal to the City of Boston and show the Menino administration that these policies are not only effective but they are cost-effective. The ideal way to do this is by comparing the current status quo to the alternatives. In the current status quo, there were over 600 bicycle related incidences last year alone according to Boston Bikes. It is important to consider that, with each of these incidences, comes the potential for lawsuits to the City of Boston from injured parties along with the disruption along city roads – costing the City millions of dollars per year. Along these lines, the National Safety Council reports that, on average in 2005, each bicycle/pedestrian injury in the United States cost $52,900 and each bicycle/pedestrian fatality cost $3,840,000. As Bostonians continue to ride bicycle, this situation will continue to worsen if significant policies are not adopted to ameliorate these safety shortcomings.

Second, in organizing key groups to support these policies, businesses on the Boston University Campus and in surrounding areas may also need to be considered. Businesses can potentially be a group which opposes the reforms due to the real possibility of lost customers – especially in adopting policies like the bicycle lanes barriers which may replace parking for drivers

---

who are customers at local places. One approach in highlighting the benefits of a more bicycle-friendly campus is to highlight the potential for a larger consumer base. Currently, each parking space brings one-two consumers for local businesses; however, an increase in bicycles could mean that more potential customers can easily travel through the Boston University Campus and the city as a whole. As an added incentive and a secondary policy, instead of completely removing parking spaces, in areas that contain bike barriers or some other infrastructural policy, there is also room for the addition of bicycle parking.

In many of the nation’s top bike cities, one way that cities look to incentivize biker support of local businesses is by accommodating them through bike racks/parking. More specifically, by incorporating these bicycle racks, it assures that local businesses will maintain a stable customer base – if not increase it due to an increase in spatial capacity to accommodate more people – bikers will have a place to park their bicycles, and the city will avert expensive costs associated with bicycle-related incidents and provide a safer environment for the community as a whole.

**Implementation**

In assuring that the any of the aforementioned policies can succeed, it is important that Boston University formulates a solid implementation strategy to induce compliance from bicyclists,
pedestrians, and drivers on new safety measures and current road signs. While the policies themselves have the capacity to improve the safety and infrastructure of the Boston University Campus itself, to overcome cultural shortcomings and incentivize or induce compliance coercively, it is evident that this policy implementation should address to key areas – enforcement and education. It is important to address these two areas in the implementation phase of these policies in order to discourage groups from breaking the law and compromising other individuals’ safety; to spread awareness of the new measures; and to encourage safe behavior from all key groups.

Accordingly, the first area that a successful implementation phase needs to address is enforcement; more specifically, what role do Boston University agencies, such as Boston University Police Department, play in assuring compliance? In formulating recommendations for the Boston University Police Department to better enforce these policies, it is important to note a significant limitation in their capacity to do so. Under Chapter 90C, section 2A of Title XIV Public Ways and Works under Massachusetts General Law, “the authority for police officers appointed by trustees of the commonwealth’s state universities and community colleges…shall be limited to the issuance of citations for violations occurring on the property of state universities and community colleges.”38 In other words, in areas that do not belong to Boston University, such as Commonwealth Avenue, Boston University Police does not have the authority to issue citations to vehicles who commit a motor vehicle offense. This is a big limitation in creating any significant enforcement policies. Initially, in order to overcome this limitation, it is clear that Boston University and BUPD need to find ways to encourage the police precincts in surrounding areas, such as Boston Police and Brookline Police, to also take active measures in induce compliance. Currently, one approach to doing so which Boston University has done previously is to setup collaborative bicycle and motorist

enforcement checkpoints along Commonwealth avenue – especially near intersections. In fact, the Boston University Police Department, Boston and Brookline PD, scheduled six enforcement checkpoints through the Fall 2012 semester (Appendix C). Moreover, it is evident that these checkpoints could continue to play a significant role in helping to enforce compliance to these new policies. By instituting occasional checkpoints on Commonwealth Avenue with other police departments, BUPD are able to overcome the limitation with citations by allowing Brookline or Boston PD to issue citations for those drivers and bicyclists that break the law and this also helps to show drivers, bicyclists, and pedestrians that even minor traffic safety violations will be taken seriously. My only recommendation would be to increase the number of enforcement checkpoints that Boston University hosts throughout the year – especially in the initial installment of any of the new infrastructure policies.

In formulating a strong plan for implementation, it is also important to have a plan for educating bicyclists, pedestrians, and motorists about respecting one another on the road and obeying traffic laws. Currently, this is one of Boston University’s strengths in seeking to improve transportation safety. The Boston University Bicycle Safety Committee has already developed a comprehensive bicycle awareness and education campaign which seems to be effective. The awareness campaign itself involves three components: bike safety classes, bike and pedestrian safety events, and a cycling, motorist, and pedestrian safety advertising campaign. First, in conjunction with other advocacy groups including Mass bikes, BU Bikes, Boston Collaborative for Food and Fitness, and the Commonwheels Bicycle Coop, BU Bike Safety Committee held five bicycle safety classes during the Fall 2012 semester which addressed different safety issues including on-bike skills, commuting, and biking during the winter. The second part of the awareness campaign is bike and pedestrian safety events hosted by the Bike Safety Committee and other various groups. In early September 2012, BU hosted three such events including on-campus bike safety tours held during the
Commonwealth Avenue fair and the 5th annual Bike and Pedestrian Safety Day in which over 5000 people were able to participate in bike safety checks, fittings, and safety demonstrations; free helmets, reflectors, and other safety devices were also given away to participants.

The final component to the bicycle education and awareness campaign are the bike safety advertising campaigns. Since 2008, Boston University has embarked on a different bicycle awareness advertising campaign each semester which have covered topics such as bike lanes, helmets, safety tips, and laws. Advertising campaigns have created and distributed materials throughout the campus through the use of posters, window clings, emails, campus mailbox inserts, websites, table tents, BUS ads, and campus TV’s (Appendix D). In 2010, the Boston University Bike Safety Committee also designed and installed *Look Left for Bikes* stencils in every Commonwealth Avenue crosswalk from Kenmore square to Babcock Street. Appendix C provides more information on each of the components of Boston University’s bike safety awareness campaign. For the sake of these new proposals, I would recommend that BU looks to adapt each of these components to spread awareness to these infrastructural policies. More specifically, host a workshop(s) that educate the community on new signs, bike barriers, etc; host a ribbon-cutting at a new bicycle stoplight or another significant new infrastructure; and create an advertising campaign which highlights these new policies.

Overall, it is evident that components of Boston University’s enforcement and education campaign are already effective and useful in implementing these new policies – my recommendation is that these components are extended and adapted to assist any new adopted policies. In regards to enforcement, I would recommend that Boston University increases the number of enforcement checkpoints that they hold annually, especially in the initial phases of the adoption of any bike policies. To try and add an education component to these checkpoints, officers can also distribute bike safety materials offered from the Bike Safety Committee campaigns to passing bicyclists and
motorists. Considering Boston University’s approaches to safety awareness, it is also clear that they are already doing an effective job in spreading awareness around this issue. I would recommend that they continue to host events, workshops, and an advertising campaign that are geared directly towards the installment of any of the recommended bike policies.

CONCLUSION

This paper has sought to provide efficient, effective infrastructural policies to improve the safety of bicyclists on the Boston University campus. Specifically, I recommend caution signs, pavement markings, and reflectors; reduced speed limits; barriers; bicycle stoplights; and intelligent transportation systems as a means to improving the safety of bicyclists on the Boston University campus. By adopting some or all of these policies, it is evident that the safety of pedestrians, bicyclists, and vehicles as a whole will be improved.

In order to ensure that these policies are effective, a strong implementation phase that addresses enforcement and education is needed. Boston University already does a great job in addressing these two areas; in this case, there is no need to completely reinvent the wheel – only to adapt their enforcement and education plans to highlight any adopted policies. Overall, the adoption and implementation of these policies can help to reduce an issue that has become increasingly significant in the last three years – a high number of bicycle-related accidents and a lack of bicycle safety measures. Boston University has the opportunity to pioneer new innovative bicycle safety measures on its campus, which, in turn, can lead to more significant bicycle safety measures for the City of Boston as a whole.
APPENDICES

APPENDIX A: Information Cards from the MassBike ‘Same Road, Same Rules’ Campaign

**Bicyclists - Ride Smarter**

*Give Yourself Some Space:* You've got a legal right to the road, so use it; take the full lane when needed, stay away from car doors, and don’t squeeze between lanes. Two bicyclists can ride side-by-side, but get into single file if cars can’t pass safely.

*Go With The Flow:* Ride in the same direction as other traffic, and ride as straight as you can; don’t weave between parked cars or into crosswalks.

*Take A Break:* Stopping at red lights and stop signs gives you a chance to relax, chat with the cute biker behind you, and set a good example for everyone else on the road.

*Light Up The Night:* Lights help you see where you’re going, but it’s more about everyone else seeing you.

*Walkers Go First:* If you run into a pedestrian, it doesn’t matter who was right or wrong. It just hurts.

*Get Some Head Insurance:* We hope you’ll never need your helmet, but the one time you do, there is no substitute. Your brain is your most important piece of safety equipment.

---

**Motorists - Drive Safer**

*Bicycles Are Vehicles Too:* The law says bicycles are vehicles, and it’s OK (and often safer) for them to ride in the middle of the lane.

*Bicycles Reduce Traffic:* Sometimes it might seem like bicyclists are slowing you down, but remember, every person on a bicycle is one less car on the road.

*Save The Squeeze Plays For Baseball:* Stay a few feet away from bicyclists when passing; don’t try to squeeze past them.

*No Sudden Moves:* Abrupt turns can cause crashes, so always look for bicyclists and use your turn signals.

*Look Before You Leap (Out):* Look behind you for approaching bicycles before opening a door on either side of your vehicle (or risk a $100 fine).

*The Truth About Bike Lanes:* While cars must stay out of bike lanes, bicyclists do not have to stay in the bike lane.

*There’s No Nice Way To Honk:* Honking can startle a bicyclist and cause a crash, so only honk when absolutely necessary.
APPENDIX B: SB 2573 – An Act Relative to Bicyclist Safety

SENATE, No. 2573
The Commonwealth of Massachusetts
IN THE YEAR OF TWO THOUSAND AND SEVEN

AN ACT RELATIVE TO BICYCLIST SAFETY

Be it enacted by the Senate and House of Representatives in General Court assembled,
And by the authority of the same, as follows:

1 SECTION 1. Chapter 6 of the General Laws is hereby amended by inserting after section 116C
2 the following section—

3 Section 116D. (a) The municipal training committee shall develop and establish within the
4 recruit basic training curriculum a course for regional and municipal police training schools on
5 or before January 1, 2008 for the training of law enforcement officers in the commonwealth in
6 bicycle safety enforcement and also shall develop guidelines for traffic enforcement for
7 bicyclist safety. As used in this section, “law enforcement officer” shall mean any officer of a
8 municipal police department.
(b) The course of basic training for law enforcement officers shall, no later than January 1, 2008, include, but not limited to, at least 2 hours of instruction in the procedures and techniques described below:—

(1) the rights and duties of bicyclists set forth in chapter 85,

(2) patterns and sources of injuries to bicyclists, both those involving and not involving motor vehicles, and the percentage of crashes involving cyclists riding against traffic, riding at night, and riding on sidewalks,

(3) the most dangerous actions by bicyclists, and methods for citing bicyclists, including

minors,

(4) common motorist actions causing bicycle crashes,

(5) reporting bicyclist crashes, and

(6) motorists intentionally endangering bicyclists.

(c) All law enforcement recruits shall receive the course of basic training for law enforcement officers, established in subsections (a) and (b), as part of their required training program.

(d) The course of basic training for law enforcement officers shall be taught as part of the highway safety component of the recruit academy training, so that there will not be an increase in the currently required hours of recruit training.
(e) The course of instruction, the learning and performance objectives, the standards for
training, and the guidelines shall be developed by the municipal training committee in
consultation with the Massachusetts bicycle advisory board and appropriate groups and
individuals having an interest and expertise in bicycle safety.

(f) The municipal training committee may include this course of instruction within its in-service
training curriculum available to in-service trainees and any other public safety officers.

SECTION 2. Section 11A of chapter 85 of the General Laws is hereby repealed.

SECTION 3. Section 11B of said chapter 85 as appearing in the 2004 Official Edition, is
hereby amended by inserting after the word “turn”, in line 9, the following words:— ; provided,
however, that signals need not be made continuously, and shall not be made when both hands
are needed for the safe operation of the bicycle.

SECTION 4. The second paragraph of said section 11B of said chapter 85, as so appearing, is
hereby amended by striking out clause (1) and inserting in place thereof the following clause:—

(1) Bicyclists riding together shall not ride more than two abreast and, on a roadway with more
than one lane in the direction of travel, shall ride within a single lane. Nothing herein shall
relieve a bicyclist of the duty to facilitate overtaking as required by section 2 of chapter 89.

SECTION 5. Said chapter 85 is hereby further amended by striking out section 11C, as so
appearing, and inserting in place thereof the following section:—

Section 11C. A police officer taking cognizance of any traffic law violation committed by a
bicyclist may request the offender to state his true name and address. Whoever, upon such
request, refuses to state his name and address, or states a false name and address or a name and address which is not his name and address in ordinary use, shall be punished by a fine of not less than $20 nor more than $50. Any such offender so refusing to state his true name and address may be arrested without a warrant, but no person shall be arrested without a warrant for any other such violation. The officer shall use the ticketing procedure described in chapter 90C, except that any violation committed while operating a bicycle shall not affect the status of the bicyclist’s license to operate a motor vehicle nor shall it affect the bicyclist’s status in the Safe Driver Insurance Plan. When a citation is issued to a bicyclist, the fact that the violator is a bicyclist shall be clearly indicated on the ticket, and failure to do so is a defense to the violation.

The parent or guardian of any person under 18 years of age shall not authorize or knowingly permit any such person to violate any of the provisions of this section. A violation of any provision of this section by a person under 18 years of age shall not affect any civil right or liability nor shall such a violation be considered a criminal offense. If the offender is under 16 years of age, the officer may give such notice to the parent or guardian of the offender.

All fines collected pursuant to this section shall be used by the respective cities and towns for the development and implementation of bicycle programs.

SECTION 6. The second paragraph of section 11D of said chapter 85, as so appearing, is hereby amended by adding the following sentence.— A person, firm or corporation engaged in the business of renting bicycles shall make available a bicycle helmet conforming to the specifications for bicycle helmets of the U.S. Consumer Product Safety Commission to any person who will operate the bicycle.
SECTION 7. Section 2 of chapter 89 of the General Laws, as so appearing, is hereby amended by inserting after the word "vehicle", in line 3, the following words:— and shall not return to the right until safely clear of the overtaken vehicle.

SECTION 8. The first paragraph of said section 2 of said chapter 89, as so appearing, is hereby amended by inserting after the first sentence the following sentence:— If it is not possible to overtake a bicycle or other vehicle at a safe distance in the same lane, the overtaking vehicle shall use all or part of an adjacent lane if it is safe to do so, or wait for a safe opportunity to overtake.

SECTION 9. The first paragraph of section 14 of chapter 90 of the General Laws, as so appearing, is hereby amended by inserting after the 11th sentence the following sentence:— No person operating a vehicle that overtakes and passes a bicyclist proceeding in the same direction shall make a right turn at an intersection or driveway unless the turn can be made at a safe distance and at a reasonable and proper speed.

SECTION 10. Said section 14 of said chapter 90, as so appearing, is hereby further amended by inserting after the word "direction", in line 63, the following words:— including a bicycle on the right of the other approaching vehicles.

SECTION 11. The first paragraph of said section 14 of said chapter 90, as so appearing, is hereby amended by inserting after the 13th sentence the following sentence:— It shall not be a defense for any motorist causing an accident with a bicycle that the bicycle was to the right of auto traffic.
APPENDIX C: Boston University Bicycle Safety Committee Activities Overview

Boston University’s Bike Safety Committee Fall 2012

2012 Bike Safety Classes

7/21/2012   Bike for Everyone: On-Bike Skills Class

Sponsored by the BU Bike Safety Committee, Mass Bike, & Boston Collaborative for Food & Fitness

9/15/2012   Bike for Everyone: On-Bike Skills Class
Sponsored by the BU Bike Safety Committee, Mass Bike, & Boston Collaborative for Food & Fitness

9/16/2012  **Bike for Everyone: On-Bike Skills Class**
Sponsored by the BU Bike Safety Committee, Mass Bike, & Boston Collaborative for Food & Fitness

10/13/2012  **Biking for Everyone: Commuter Workshop**
Sponsored by the BU Bike Safety Committee, BU Bikes, Mass Bike, & Boston Collaborative for Food & Fitness

12/10/2012  **Biking for Everyone: Winter Workshop**
Sponsored by the BU Bike Safety Committee, BU Bikes Mass Bike, & Boston Collaborative for Food & Fitness and the Commonwheels Bicycle Coop

### Bike & Pedestrian Safety Events

9/7/2012  Bike & Pedestrian Safety Table at the Comm. Ave. Fair

The Bike Safety Committee hired Urban Adventours to provide guides and 25 bikes for four hours to take students on-bike safety education tours of the campus.

9/10/2012  Distributed the Mass Bicycling Coalition’s *Bicyclists Ride Smarter* bike safety tip sheet to every on-campus mailbox (9,000+)

9/13/2012  5th Annual **Bike & Pedestrian Safety Day**: Estimated attendance was 5,000

<table>
<thead>
<tr>
<th>2012 Bike &amp; Pedestrian Safety Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass Bike</td>
</tr>
<tr>
<td>Landrys Bicycles</td>
</tr>
<tr>
<td>Boston Bikes</td>
</tr>
<tr>
<td>REI</td>
</tr>
<tr>
<td>Boston Police</td>
</tr>
<tr>
<td>Urban AdvenTours</td>
</tr>
<tr>
<td>Brookline Police</td>
</tr>
<tr>
<td>WalkBoston.org</td>
</tr>
<tr>
<td>BU Police</td>
</tr>
<tr>
<td>Back Bay Bicycles</td>
</tr>
<tr>
<td>BU Parking &amp; Transportation</td>
</tr>
<tr>
<td>Giant Bicycle</td>
</tr>
<tr>
<td>Sustainable BU</td>
</tr>
<tr>
<td>International Bicycle</td>
</tr>
<tr>
<td>BU MED</td>
</tr>
<tr>
<td>EMS</td>
</tr>
<tr>
<td>BU Bikes</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>BU Cycling Club</td>
</tr>
<tr>
<td>Commonwheels Bicycle Coop</td>
</tr>
<tr>
<td>Boston Cyclists Union</td>
</tr>
<tr>
<td>Livable Streets</td>
</tr>
<tr>
<td>Hubway</td>
</tr>
</tbody>
</table>

Bike & Pedestrian Safety Day features ride ready bike safety checks, fittings, bike safety demonstrations, free safety giveaways including helmets, lights and reflectors. In addition to safety tip sheets and brochures, the Bike safety Committee has distributed 15,000 bike safety related items including bike helmets, flashlights, lights, and reflectors.

**Bike, Motorist & Pedestrian Safety Enforcement** (all enforcement dates below took place from 8am-10am & 3pm-5pm)

- **9/24/2012**  BU, Boston and Brookline Police Cycling and Motorist Enforcement along Commonwealth Avenue
- **9/26/2012**  BU, Boston and Brookline Police Cycling and Motorist Enforcement along Commonwealth Avenue
- **9/28/2012**  BU, Boston and Brookline Police Cycling and Motorist Enforcement along Commonwealth Avenue
- **10/18/2012** BU, Boston and Brookline Bike Patrol Officers distributed free bike helmets, safety tip sheets, light and reflectors to cyclists along Commonwealth Avenue
- **11/19/2012** BU, Boston and Brookline Police Cycling and Motorist Enforcement along Commonwealth Avenue
- **11/21/2012** BU, Boston and Brookline Police Cycling and Motorist Enforcement along Commonwealth Avenue

**Cycling, Pedestrian, and Motorist Safety Campaigns**

In 2010, the Bike Safety Committee designed and installed *Look Left for Bikes* stencils in every Commonwealth Avenue crosswalk from Kenmore Square to Babcock Street.
The Bike Safety Committee has produced safety campaigns each semester since its inception in 2008. These campaigns have covered cycling safety tips, laws, helmets, and bike lanes. These materials were distributed throughout the campus through the use of posters, window clings, emails, campus mailbox inserts, websites, table tents, BUS ads, and campus TV’s.

APPENDIX D: Boston University Bicycle Safety Committee Awareness Campaign Flyers

Bike Helmet Giveaway: Boston, Brookline, and BU police officers gave out 100 free helmets, as well as violations containing bike safety tips and a Landry’s Bicycle 20 percent off coupon for helmets and bike locks, to bicyclists not wearing a helmet at the Comm Ave and BU Bridge intersection October 18. Photo by Vernon Doucette.
Keep your head, wear a helmet.

Whatever you wear, wear a helmet.

BICYCLE SAFETY DAY

Thursday, September 8, 2011
10 a.m. – 2 p.m. Marsh Plaza

BICYCLISTS—RIDE SMARTER

1. Give Yourself Some Space
   You’ve got a legal right to the road, so use it.
   Take the full lane when needed, stay away from car doors, and don’t squeeze between lanes.
   Two bicyclists can ride side-by-side, but get into single file if cars can’t pass safely.

2. Go with the Flow
   Ride in the same direction as other traffic, and ride as straight as you can.
   Don’t weave between parked cars or into crosswalks.

3. Take a Break
   Stopping at red lights and stop signs gives you a chance to relax, chat with the cute biker behind you, and set a good example for everyone else on the road.

4. Light Up the Night
   Lights help you see where you’re going, but it’s more about everyone else seeing you.

5. Walkers Go First
   If you run into a pedestrian, it doesn’t matter who was right or wrong; it just hurts.

6. Get Some Head Insurance
   We hope you’ll never need your helmet, but the one time you do, there’s no substitute.
   Your brain is your most important piece of safety equipment.

Thank you. Have fun, and stir great friends!
20% OFF
LOCKS & HELMETS

Receive 20% off bicycle helmets and locks at Landry's Bicycles.
Please note: This coupon is valid only at the 800 Commonwealth Ave. store.
Visit www.landrys.com for directions and store hours. Cannot be combined with any other offers and discounts and does not apply to previous purchases. Special order good through May 1, 2012.

LANDRY'S BICYCLES
SINCE 1922 • LANDRYS.COM

NOTICE TO BICYCLIST:
You have the right to take a deep breath. You're not really in trouble. But if you don't follow the 6 rules of the road on the back of this 'ticket,' you might be. So take a minute to review them, and then take this coupon to Landry's Bicycles to save on a new lock or helmet. For more tips on riding right, visit bu.edu/bikesafety.

A message from the Boston University Bike Safety Committee

YOUR LOCK STINKS. BUT NOT FOR LONG.
(Here's 20% off a new U-Lock.)

Locking your bike doesn't mean it won't get stolen. Most chain or cable locks can easily be cut with bolt cutters. BU Police recommend using a U-Lock for your best defense against bike thieves. Take this 20% off coupon to Landry's Bicycles and get your U-Lock today.

A message from the Boston University Bike Safety Committee
www.bu.edu/bikesafety
Not a door prize you’d want.

The bike lane is your space. But sometimes cars have a right in your path. And when they do, that means an instant and potentially lethal risk to your ride. Be alert and ready to brake.

More tips at www.bostonbikesafety.org

That’s a mean right hook.

Riding in the bike lane isn’t automatic protection. Drivers make right turns and don’t always see bikes. Watch where the other guy is moving. Be alert and ready to brake.

More tips at www.bostonbikesafety.org
DO:
- Wear a helmet.
- Use signals on the left.
- Lock your bike only at docks.
- Obey traffic lights and stop signs.

DON'T:
- Ride against traffic.
- Leave your bike unlocked.
- Ride the green without looking.
- Block handicapped equipment or exits.
- Look your bike at train, busline or forest.

Register your bike online at www.bua.edu/teensafety and also visit www.bua.edu/bikeability.
BIBLIOGRAPHY


Loew, Tracy and Perez, Elida S. *Bicycle Traffic Signals Get a Green light*. USA Today. 2 December 2012.


Official Website of the City of Boston. *Bike Planning/Network*.


Robinson, Joseph S. *Commonwealth Avenue is a hub of hazards*. Boston Globe. 8 December 2012.