A More Bike Friendly Boston College:
An Assessment of the Bicycle Culture at Boston College and Recommendations to Improve It

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Introduction

Biking as a method of transportation is growing nationally. Over the last decade, U.S. bike commuting has grown 47% nationwide and 73% in the largest cities (Cox). In the last two decades, the number of bike trips has more than doubled from 1.7 billion to 4 billion (“National Household Travel Survey”). The city of Boston is ranked by bicycling.com as the 16th most friendly city in America for cyclists (“America’s Best Bike Cities: 16. Boston”). In 2007, former Mayor of Boston Mayor Menino launched Bike Boston, an initiative which includes over 60 miles of bike lanes on major Boston roads, over 1,000 bike racks throughout the city, bike repair assistance to low income cyclists, and bike promotion events. In 2011, the city of Boston launched the New Balance Hubway system that connects the city through a bike share program. Universities such as Tufts, Massachusetts Institute of Technology, and Harvard have established internal bike share programs for students. They actively promote biking and are committed to making their campus bike friendly to support students.

Boston College needs to become a more bike friendly campus if it is going to accommodate the growing biking movement. A study conducted in 2009 showed that 23% of Boston College students have a bike that they use on or around campus, roughly 3,300 bikes (Cappadona). As of 2014, Boston College has 587 bike spots, enough for 2% of students to have a spot on a bike rack for their bicycle on campus at any given time. Boston College does not currently have the proper infrastructure to accommodate the current bike community that can be seen daily at over-crowded bike racks and unconventional bike chaining methods seen throughout campus.

Boston College not only needs to improve its infrastructure because of growing demand, but intrinsically cycling has environmental, health, and institutional benefits. Cycling is better for the environment than driving because it emits no carbon into the atmosphere. Cycling also has countless health benefits, and Boston College has the opportunity to influence its students’ habits. People who bike for their commute live longer, have better blood pressure, and are less likely to be overweight than their counterparts. Women who bike 30 minutes a day have a lower risk of breast cancer (Luoto). The list of health benefits is extensive. The largest health risk is crashing. In 2011 the Alliance for Walking and Biking rates Boston the safest city for biking and walking. The 2013 Boston Cyclist Safety Report found a minimal increase in crashing as compared the spike in cycling. Increasing biking capacity at Boston College could also relieve the pressure
Boston College feels with its limited parking resources. Biking could also help Boston College in relieving frustration of commuting for off campus students. By cultivating a biking culture, students would no longer see walking or the bus as their only means of transportation to campus.

By making the Boston College campus more bike friendly, administration can support the growing movement and cultivate a community that takes advantage of the many benefits biking has to offer. In the past, Boston College has looked to make a full-fledged bike share program available to students. Unfortunately, the legal team found the liability of a bike share too great for the university to take on. Efforts are now being directed toward making the campus more bicycle friendly. A new student group, Bike BC, was founded in Spring 2014 with this exact goal in mind. Students are now looking for funding to add bike racks to campus, increase inclement weather bike storage, facilitate a partnership with a bike repair shop, hold workshops on safety and bike repair, and improving the campus so that one day perhaps BC could have a bike share program. In the future, Boston College should look to their 10-year plan to make the campus bike friendly and safe.

Methods

First, to get an idea of the current biking situation on campus, we met with the student initiative Bike BC and Paul Cappadona of the Office of Transportation and Parking. Through these meetings, we assessed past and current initiatives surrounding biking on campus and identified challenges that these initiatives had faced. Second, we performed field observations in order to determine challenges facing bike riders on and around campus. In this phase, we rode, on bike, to each bicycle rack on campus, observing the racks and keeping an eye out for stray bicycles as well as noting any times we felt uncomfortable or inconvenienced while riding. Third, we used resources on the Boston College website to determine the population densities of dormitories, the current numbers and locations of racks, as well as the future plans Boston College has for its campus. Finally, based on the results of our meetings, observations and research, we make recommendations that the Office of Transportation and Parking should consider to promote bicycling on campus by making it a more bike friendly environment.
History of Bike Share Efforts at Boston College

Boston College administrators have long considered adopting a conventional bike share program for Boston College students. Paul Cappadona, Manager of the Boston College Office of Transportation and Parking has been at the helm of creating a bike share program. Through his Masters in Leadership, Mr. Cappadona designed a bike share program he believed would work for the campus. The program consisted of 20 bikes which would be rented from a single location on campus. The total cost of the program would be $14,500 in the first year. Mr. Cappadona found several institutional obstacles including university liability, lack of funding, and responsibility.

The largest obstacle Mr. Cappadona came across was the liability associated with a bike share program. The university could be liable for student injuries if an accident were to occur through their bike share program. This was one of the strongest arguments against Boston College participating in the already established City of Boston Hubway system. If BC were to build a Hubway, it would bring strangers to campus leaving the campus vulnerable to incidents. When Hubway pitched the idea to UGBC and administration, the Hubway would not only be very expensive but students would still have to pay full membership prices to use the Hubway. The Hubway system failed to gain any traction in the administration due to the liability and expense of participating in such a system.

The second largest obstacle was finding a department to take on the responsibility of a bike share program. The program Mr. Cappadona designed could run from several different locations; Office of Transportation, the PLEX, or Office of Health Promotion. Several students on campus are extremely excited about the concept of a bike share program. However, those students will graduate and the responsibility of the program can then fall entirely on the department. Unless there is established student succession, departments are shy about taking on additional work and projects. No office on campus wanted to take on the responsibility, so Mr. Cappadona offered the Office of Transportation. Ultimately the offer was futile as the university found the liability of a bike share program too great.

Mr. Cappadona has not yet given up yet. He has redirected his efforts from a bike share program to making Boston College more bike friendly. He is currently the advisor of BC Bike, a new student group with the goal of creating more opportunities for Boston College cyclists. Boston College is also investigating using bike share consulting firm Zagster to create an on
Mr. Cappadona is not hopeful that Zagster will be successful in proposing a bike share program for Boston College unless they accept all liability associated with the program. As of April 2014, a meeting between the university and Zagster had not yet occurred.

Bike BC

A student initiative is the most current attempt at promoting a bicycle culture at Boston College. Founded Fall 2013 by seniors Andreas Wolfe and sophomore Parker Aubin, Bike BC is an organization that has the mission of providing “a better environment for bikes on and around campus through advocacy and communication with students, university officials, and members of the community” (Bike BC Constitution). Wolfe and Aubin’s efforts have been directed at both short-term and long-term goals with the hope of establishing Bike BC as the foundation of a more bicycle-friendly Boston College. They were granted official recognition as a student organization in March 2014 (Bike BC Legacy Grant).

Andreas recruited Director of Transportation Paul Cappadona to be the faculty advisor, who has had previous experience with setting up a bicycle-sharing program. Meetings between Bike BC and Cappadona have largely dealt with adding more parking spaces for bicycles. Bike BC has submitted a proposal which has dealt with infrastructure improvements and other miscellaneous features, such as self-repair stations. However, the Office of Transportation met this proposal with reticence, as they would need to consider funding of the project and to analyze its need. Steps that Bike BC has taken to acquire funding have been to gain official recognition as a student organization and to apply for a Legacy Grant. The latter alternative is likely to offer a larger portion of the funding, upwards of $2,500. So far, Bike BC has been able to secure six bicycles through donations from the Boston College Police Department and store them in a closet in Roncalli.

Members of Bike BC were able to promote their organization after gaining official student organization status by the Division of Student Affairs. Their activities in the Spring 2014 semester have been largely limited to student outreach programs. They have promised to “promote bikes in a fun and engaging manner through programming such as group rides, screenings of films, [and] instructional lessons” (Bike BC Constitution). They have set up their own bike loan program In addition, gauging student interest through these activities will also
contribute to the administrative responsibility of analyzing the need of increased bicycle infrastructure.

An important proponent for Bike BC’s short-term plans has been the undergraduate student government, UGBC. Bike BC has managed to push the idea of a bicycle sharing program through a UGBC-moderated forum known as CampusVoice, which encourages students to suggest ideas and UGBC considers the idea if there are enough votes on the suggestion. As of April 2014, UGBC is very likely to fund a part of Bike BC’s bicycle-sharing initiative. Also, another third-party bicycle distributor, FreeBike Project has also associated with Bike BC in order to provide bicycles to students and reach a wider audience in the Boston College community.

Membership to Bike BC is open to any member of the Boston College community at no cost. Ideally, the organization wishes to grow in numbers, with the hope that there would be a proportional increase in bicycle supply to allow for the greatest student satisfaction. Currently, the responsibilities of the club are distributed among the members of the club, given their small contingency.

**Boston College’s 10 Year Institutional Master Plan**

In need of altering Boston College’s campus to coincide with the school’s mission and future goals, BC composed the 10 Year Institutional Master Plan. The plan was created by a committee of 200 engaged students, faculty and staff members, with the assistance of Sasaki Associates of Watertown. The planning began in Spring of 2003 while the strategic plan was adopted in 2006. The Institutional Master Plan was submitted in June 2008 and was approved on June 10th of 2009.

The future goals consist of:
1. Creating one campus
2. Developing mixed campus uses
3. Emulating the character of the middle campus
4. Providing appropriate campus density
5. Promoting student formation
6. Achieving sustainability (Boston College Institutional Master Plan).
Through this plan, “the University hopes to create an academic program that will help attract the very best students… it hopes to provide the best possible facilities to support them, with the goal of helping one of the nation’s best universities to become even better” (Boston College Institutional Master Plan).

The plan consists of:
- Replacing Flynn Recreational Center with another 200,000 sf recreational center
- Construction of a 285,000 sf student center to accommodate 230 student organizations, provide dining and conference space, expansion of theater space, and more
- Construction of a new dormitory hall on Shea field and replacing More and Edmonds Hall
- Construction of 4 new buildings, one being the recently finished Stokes Hall
- Addition of a series of linked quads on lower with “green relief”
- Addition of “green gateways” in specific street corners
- Addition of quadrangles and courtyards adjacent to proposed residence halls and academic buildings (Boston College Institutional Master Plan).

There are other plans included in the 10 Year Institutional Master Plan however these listed pertain to the topic of bicycle use on campus. Boston College also has the goal to meet 100% of demand for housing within the 10 years in order to alleviate pressure on City neighborhoods (Boston College Institutional Master Plan). With the additions of dorm halls in expanded and scattered areas along with the 100% met demand goal, BC should incorporate more biking options on campus. This could also reduce the demand for a shuttle bus if 100% of students who want on campus housing receive it. The Institutional Master Plan does not plan to provide any additional parking spaces other than the already existing parking areas outside of buildings.

Boston College’s 10 Year Institutional Master Plan also strives to improve the pedestrian environment and places an emphasis on overall healthier lifestyles (Boston College Institutional Master Plan). To provide a more bike friendly environment on campus would mean greater pedestrian safety while also encouraging a healthier lifestyle. BC also provides several storage locations and lockers with showers throughout campus. Both the Boston Police Department and Boston College Police Department have officers patrolling on bicycles rather than motor vehicles. To accommodate these existing bicyclists could generate greater awareness and demand for student bicycling.
Boston College encourages bicycle use and the biking lifestyle for its community members however, in the 10 Year Institutional Master Plan, there is not a high initiative in improving the use of bicycles. BC is a part of MassRIDES Bike to Work Week (BTWW) and was the 2008 winner with 29 participants. They advocate for the program through distributing promotional material and incentives during Bike Week while also increasing bicycle safety, awareness, and use. BC also places high prices on parking permits and passes in order to promote carpooling and to maximize the limited space. Overall, “Boston College promotes biking as an alternative to driving” (Boston College Institutional Master Plan).

Currently, around 2% of the student population and 1% of the employee population commute by bicycle to the Boston College campus (Boston College Institutional Master Plan). Minimal increases in bicycle activity are projected in the future therefore the Boston College 10 Year Institutional Master Plan does not have an initiative to increase bicycle friendliness. BC still plans to continue to promote bicycling as an alternative mode of transportation and will also continue to monitor bicycle storage and add new racks if the demand for it on campus increases. The purpose of the 10 Year Institutional Master Plan coincides with overall well-being of BC students and a biking initiative although not evident now, has high potential in the future.

**Recommendations**

We make four key recommendations for the Office of Parking and Transportation to increase biking accessibility, convenience, and safety in order to make Boston College a more bike friendly community: (1) increasing the number and locations of bike racks on campus, (2) working with the City of Boston and Newton to establish bike lanes on major roads in the Boston College area, (3) hosting transportation workshops for incoming freshman and, (4) establishing a bike repair and equipment service station on campus. These actions will be critical in accommodating the increasing number of bicycles that is expected on campus as biking becomes more popular as well as ensuring the safety of those biking on, off, and between the multiple Boston College campuses.

**1. Increasing the number and locations of bike racks on campus**

There are currently 33 bike rack locations on the Boston College campuses, with 29 being on the Chestnut Hill campus and 4 on the Newton campus. Exact locations of these racks are shown in Figures 1 and 2 (“Campus Wide Bike Rack Inventory”).
Based on our field observations, we have determined that the current number of bike racks is inadequate in accommodating the number of bicycles on campus and are lacking in certain key locations. This has resulted in the locking up of bicycles on trees, benches, and poles,
which both indicates inconvenience for bike riders and negatively impacts campus aesthetics. Examples of such sights are shown in Figure 3.

**Figure 3. Overwhelmed bike racks and unconventional bike stowing locations**

In order to alleviate these issues, we recommend that new bike racks be placed strategically around campus. Using our observations of racks around campus in combination with consideration of population density, level of activity, and road accessibility, we have determined the following as appropriate locations for new and additional bike racks:
Michael P. Walsh Hall: While Walsh Hall currently houses two bike racks with capacity for 24 bicycles, we observed on three separate occasions (Monday February 24th, Wednesday March 18th, and Thursday April 24th) that the racks were overflowing with bicycles. Walsh Hall houses approximately 800 students and staff, making it the most populated residence hall on Lower Campus (“Residence Hall Capacities”). Also, because of its location on St. Thomas More Road, there is easy road access from this building. Using Paul Cappadona’s estimation that 23% of students own a bicycle on campus, approximately 184 students in Walsh would be expected to own a bicycle. The current racks therefore only accommodate 13% of this estimated number of bikes. The need for additional racks in this dormitory is especially severe due to the fact that the suites are small, and therefore it is difficult for students to keep bicycles inside in their rooms.

While it may not be possible to install 5 or 6 new racks on the left side of the front entrance of the building, where the current racks are, there is room for at least one more rack (See Figure 4). Further, there is room on the right side of the entrance and across the walkway, near the Modular gates, for additional racks. A rack near the Modular gates would be especially useful as the Modulars, which are located directly across from Walsh Hall and houses approximately 450 students and therefore an estimated 103 bicycles, currently do not have any racks within its gates (“Residence Hall Capacities”). The two closest racks are located at Walsh Hall and Edmonds Hall, both which are currently overwhelmed.

![Figure 4. Walsh Hall: Current racks are indicated in green, proposed racks in red](https://maps.google.com/)

Edmonds Hall: Edmonds Hall, located next to Walsh Hall, is the second most populated building on Lower Campus. It also has direct road access on St. Thomas More Road and houses approximately 780 residents and 179 bikes. Because the suites in this dormitory are apartment
style, and more spacious than those in Walsh Hall, it is expected that more students here keep their bikes in their own rooms. However, it was observed that the racks outside of the building, which has the capacity to accommodate 36 bicycles, were also overwhelmed with bikes. Several bikes were chained up to trees close to the entrance of the building (See Figure 5). There is ample room in the lawn area near where the current racks are located to place at least four more racks.

![Image of Edmonds Hall with bike racks](https://maps.google.com/)

**Figure 5. Edmonds Hall: Current racks are indicated in green, proposed racks in red**

Source: https://maps.google.com/

**Corcoran Commons Dining Hall:** Corcoran Commons is a hub of activity on the Lower Campus, easily accessible by bike on Campanella Way. It functions not only as a dining facility, but also as a popular place for group meetings, student activities such as Trivia night, and various functions and events that take place in the Heights Room, Newton Room, and Boston Room upstairs. Thousands of students as well as employees, many of whom commute from the greater Boston area, go through Corcoran everyday. There are currently no bike racks outside of the building, but a need for one is indicated by the presence of multiple bicycles parked outside the front entrance (See Figure 3). When interviewed, Kristin Sirek, an employee of Boston College Dining Services, stated that she parks her bike in a hallway inside the building when she rides it to work. To the left side of the main entrance of Corcoran is an appropriate placement for racks (Figure 6). Racks here could be especially beneficial for employees, some who currently
commute over an hour by public transportation, by encouraging them to bike to work instead, which could significantly cut down the time of their commute.

**Figure 6. Corcoran Commons: proposed rack indicated in red**
Source: https://maps.google.com/

O’Neill Library and Plaza: As the biggest library on campus, this is another hub of activity on the Boston College campus. Located on Middle Campus, the 3rd floor entrance is accessible by Linden Lane on the North and from Beacon Street on the South. There is currently one bike rack on the south side of the building that accommodates eight bicycles. It is recommended that another rack be installed closer to the front entrance, possibly across the pedestrian pathway that runs between O’Neill and St. Mary’s Garden (Figure 7).

**Figure 7. O’Neill Library and Plaza: Current racks are indicated in green, proposed racks in red**
Source: https://maps.google.com/
2. Working with the City of Boston and Newton to establish bike lanes on major roads

In our field observations, we noticed that the roads on and within the Chestnut Hill campus and connecting it to Brighton and Newton Campuses are severely lacking bike lanes, posing significant safety issues for Boston College community members who choose to bike on, around and between campuses. While the Chestnut Hill main campus is circumvented by four roads (Commonwealth Avenue to the North, St. Thomas More Road/Chestnut Hill Drive to the East, Beacon Street to the South, and College Road to the West), Beacon Street is the only street that currently has full bike lanes.

A bike lane on the Boston side of Commonwealth Avenue starts at its intersections with Lake Street and Saint Thomas More, in other words, at the edge of the Main Campus near More Hall. While this is useful for bikers who wish to commute off campus, it is problematic for students who live in dormitories along Commonwealth Avenue (Voute Hall, Gabelli Hall, and 66) as well as those wishing to access offices along Commonwealth Avenue like the Career Center. On the Newton side of the street, there is a carriageway that many bikers have been observed using to travel West, toward Newton campus. This is useful for students wishing to bike between the Newton and Chestnut Hill campuses. However, Centre Street, on which Newton Campus is located, has no bike lane. For the safety of its community bike riders, the Office of Transportation and Parking has vested interest in pressuring the City of Boston and City of Newton to install bike lanes on (in order of importance as determined by heaviness of auto traffic) Commonwealth Avenue, Centre Street, St. Thomas More Road/Chestnut Hill Drive, and College Road. Roads that run through campus, specifically Campanella Way and Linden Lane, could be installed with bike lanes as well.

3. Hosting transportation workshops for incoming freshman

The Office of Transportation and Parking website provides links to maps that outline racks for bicycles on the Newton and Chestnut Hill campuses. While this information is useful, many students on campus are unaware of the existence of such a source. In order to make this information more accessible to all students, we recommend that the Office of Transportation and Parking reach out to incoming freshman each Fall either through a workshop during Freshman Orientation or through a collaboration with freshman Resident Assistants (RA’s) and Residence Hall Directors (RD’s) in the Residence Hall Association (RHA). A workshop session to
introduce freshmen and transfer students not only to biking on and near campus, but to different modes of transportation, including the BC shuttle system, bicycling, the MBTA T and bus systems, Eagle Escort and taxi systems would help students understand their transportation options in a city that many incoming students are not familiar with.

In the biking portion of such a workshop, it is recommended that maps of bike racks on campus be distributed, along with some key bikeable routes on and between campuses since the topography of the campus and its numerous staircases can make bicycling on campus confusing and challenging. Safe routes to popular destinations, such as Cleveland Circle, Boston and Cambridge, should be provided to help guide students who wish to explore off campus on their bicycles. Additionally, information on external sources for biking in Boston, like the city of Boston’s bike routing website (http://www.cityofboston.gov/bikes/maps.asp) should be made available. This website routes the safest biking routes for the user, who simply has to type in their starting point and destination.

It is also recommended that the benefits and challenges of biking in Boston be discussed. Some benefits that could be discussed are the physical health benefits of riding a bike (perhaps the Office of Health Promotion would be willing to collaborate), the environmental benefits of a fossil fuel free mode of transportation, and the ability to travel faster than public transportation in some cases. Because the student body at Boston College is composed of students from all over the country and the world, many may come from places where biking is popular and wish to bike while at Boston College, but are not familiar with the New England weather. It is therefore especially important that safety issues concerning winter conditions be discussed in this workshop. Other safety issues that should be discussed include helmet and reflective gear use and traffic rules. From our interaction with the student group Bike BC, we strongly believe that they possess the expertise to provide input on information regarding routes and safety as well as the willingness to volunteer to speak and answer questions in the bicycling portion of an Office of Transportation and Parking workshop for freshmen.

4. Establishing a bike repair and service station on campus

Finally, as safety and liability are two of the major issues concerning the Office of Transportation and Parking about increasing biking at Boston College, it is recommended that a facility to offer bike repair services be established on campus. Such a facility would ensure that
bike riders of the Boston College community have fully functional bicycles which are critical for safety, without the issue of liability associated with renting out bicycles in a bike share program.

These types of facilities have been implemented successfully at various other universities across the United States. For example, Princeton University runs a community repair shop, called the Cyclab, which provides access to tools, space and knowledgeable staff to help students perform their own repairs (“The Cyclab”). A similar type of shop at Boston College could be staffed by student employees trained in performing simple repairs, but give the users the option of performing the repair themselves in order to encourage hands on learning. Such a facility could also sell basic biking equipment and gear, such as helmets and locks, to increase accessibility to these items for the Boston College biking community.

Another option for a repair center is a completely do it yourself maintenance station at which necessary tools to perform basic bicycle repairs, such as changing flat tires and adjusting brakes or handlebars, are provided. At Pennsylvania State University, maintenance units offer tool set containing Phillips and flat head screwdrivers, Allen wrenches, headset wrench, pedal wrench, box wrenches, tire levers, and a tire pump are installed on campus. All the tools are connected to a central post by stainless steel cables and bicycles can be suspended from the post so the pedals and wheel can spin freely to make adjustments (“Bicycle Repair Stations Offer Campus Bikers Easy Access to Tools”)

Dero, a company based in Minneapolis, MN, produces self-repair units called Fixit® that would be appropriate for Boston College (Figure 8). It consists of tools necessary as well as a quick response code that can be scanned with a smart phone which will bring the user to a website that will walk them stepwise through basic repairs. Though one unit requires an area of only 28 square feet and a clearance of 5 feet, they would require housing in covered structures to protect them from harsh weather.
Figure 8. Dero Fixit® repair station
Source: http://www.dero.com/products/fixit/

Making the maintenance and repairs of bicycles accessible on campus will both increase safety for the Boston College biking community as well as provide opportunities to learn new skills.

Conclusion

After a semester of researching the viability of a bike share program at Boston College, we conclude that it is not likely that a bike share program can be implemented any time in the near future. This is due to BC’s concern on liability, lack of funding, and demand. Instead of a full bike share program implementation, administration should work on creating a more bike friendly environment for cyclists. Some recommendations would be to place more bike racks around campus, to work with the city of Boston and Newton to create bike lanes around the campuses, to host transportation workshops for incoming freshmen, and establish a bike repair and equipment service station on campus. Perhaps after some growth of biking and better provisions of resources, while also finishing their 10 Year Plan, BC could learn to work with a liability plan and accommodate a bike share program. For now, the school should place their efforts on giving its students convenience and safety for biking around the campus.
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