# Bicycle Count
Corner of 116th Street & Broadway
Manhattan, New York City

Carried out on Monday, 19 November 2012

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for: PLAN 6090 SUSTAINABLE TRANSPORT POLICY

THIS IS AN ASSIGENMENT FOR A CLASS, NOT AN OFFICIAL DOCUMENT

The New York City Department of Transportation issued the Bicycle Master Plan in 2007, and has recently intensified the implementation of bicycle infrastructure, doubling the bicycle network with an additional 200 miles of facilities between 2008 and 2011. Bicycle commuting in New York City doubled between 2007 and 2011, and the DOT aims to triple this figure by 2017. An ambitious bike share program, with 600 stations and 10,000 bikes, is slated to roll out in March 2013.

The aim of this report is to provide information on bicycle traffic at Broadway and 116th Street to the New York Department of Transportation and the Columbia University's Morningside Heights campus. This report summarizes the bicycle count carried out on Monday, 19 November 2012, providing information on the cyclists observed, and includes specific infrastructure and policy recommendations.

Images obtaned from google maps

116 & Broadway – Manhattan
New York City, Monday 19 November 2012
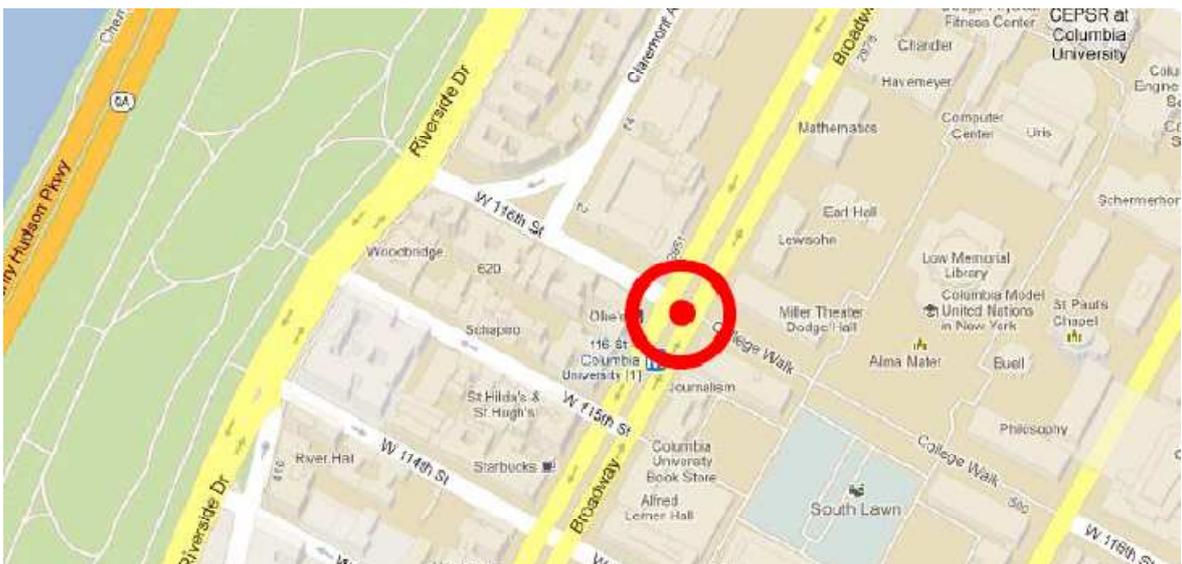
116th Street and Broadway, Manhattan: Description

Broadway is a very important North-South connection throughout Manhattan and in this neighborhood (Morningside Heights). Riverside Drive to the West and Amsterdam Avenue to the East also accommodate traffic travelling North-South. Broadway is served by the 1/2/3 subway line, as well as the M104 bus. Because 116th Street crosses Columbia University's Morningside Heights campus between Broadway and Amsterdam, it does not provide through access to motorized vehicles at this point. At this intersection, 116th Street is mainly used for access to Riverside Drive and other West-lying streets and destinations.

Although there is a Class I (physically separated) bike path in the Hudson River Park, Morningside Heights and the surrounding neighborhoods do not have extensive cycling infrastructure. Broadway's bike lane begins only South of 59th Street, there is an East-West bike lane on 106th Street, and a Northbound bike lane on 8th Avenue (4 blocks West of Broadway).

Traffic at the intersection can be described as moderate, and sometimes aggressive, with fast-moving vehicles (the speed limit is 40 miles per hour). Additionally, many large trucks were observed, either making deliveries, or using Broadway to reach their destinations.

Bicycle Count: Summary and Observations

The temperature was in the mid-40's (Fahrenheit, 6-8 degrees Celsius) and the skies were partly cloudy, with low moisture. It could be described as a typically chilly mid-November day.

With an average of 36 cyclists observed per hour (more than one every two minutes), we can conclude that there is a significant amount of cycling in the area. All possible origins and destinations (North and South Broadway, East and West 116th Street and Columbia University) showed significant amounts of ridership.

The significant amount of cyclists coming from, and going to, 116th Street suggests that bike traffic on Riverside Drive is also significant. Access to the Hudson River Park bike laneis only at 96th or 135th Streets.

The cyclists were overwhelmingly male (85 %) as we observed few children (two riding in child seats, none riding themselves) and seniors (although we are not entirely sure of this number, because we cannot be sure if those we observed to be seniors were, in fact, over 65, we estimate it to be no higher than 5).

We infer that commuters made the majority of trips, as 72% of bikers did not use cycling clothing, nor appear to be making deliveries.Despite the proximity of popular cycle-sport destinations (Palisades Parkway, Hudson River Park, Central Park), only one cyclist appeared to be a sport cyclist (with cycling clothing).

Bicycle deliveries were an important mode, and 8 % of all trips were made by electric bikes (all of these were delivery trips).

Helmet use was very significant, with 42 % of males and 61 % of females.

Observations:

One woman cyclist with a child in the child seat met an adult male (possibly her spouse) and gave him a package, then proceeded on her trip. This illustrates the practicality and flexibility of the bicycle for everyday transport.

One cyclist was observed entering the subway entrance on the Northwest corner of 116th Street. This speaks in favor of the MTA's permissive policy regarding bikes on the subway system.

A group comprising one adult woman and two children (possibly related to each other) were seen riding scooters Northbound on Broadway's Eastern sidewalk. Another adult male was seen walking with a scooter. This points to scooters as a travel mode with significant potential, also to use the same facilities as cyclists.

Policy and Infrastructure Recommendations

We feel that the significant levels of cycling at this intersection merit further investment in infrastructure and programming to make biking safer and more accessible for all. Specifically, we recommend:

- A Class I (physically separated) bike lane on Broadway
- Bicycle facilities (Class I or II), and/or traffic calming (bulb-outs, chicanes, speed tables) on 116th Street and Riverside Drive
- Lower vehicle speeds on Broadway and 116th Street (30 or 20 mph)
- Additional bike parking on the Morningside Campus and Broadway

Since they were underrepresented in our count, we also infer that women, children and the elderly experience strong barriers to cycle use. We suggest that the NYC DOT investigate these barriers and create policies to increase the participation of these groups in cycling trips.

We also suggest further investigation into cycles for delivery purposes, and electric bikes. Both of these topics have important potential as a source of solutions and problems for road users, and these should be anticipated by the city.

1. Graphs

Cyclists/hour

average = 36

Sex

Origin

North Broadway 25%

West 116th 23%

South Broadway 40%

Columbia University 12%

Destination

North Broadway 23%

West 116th 11%

South Broadway 44%
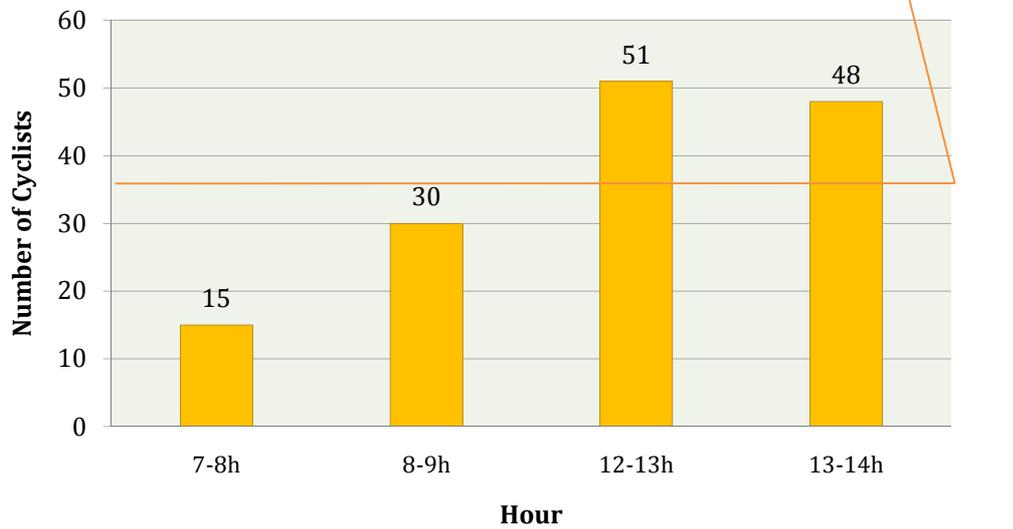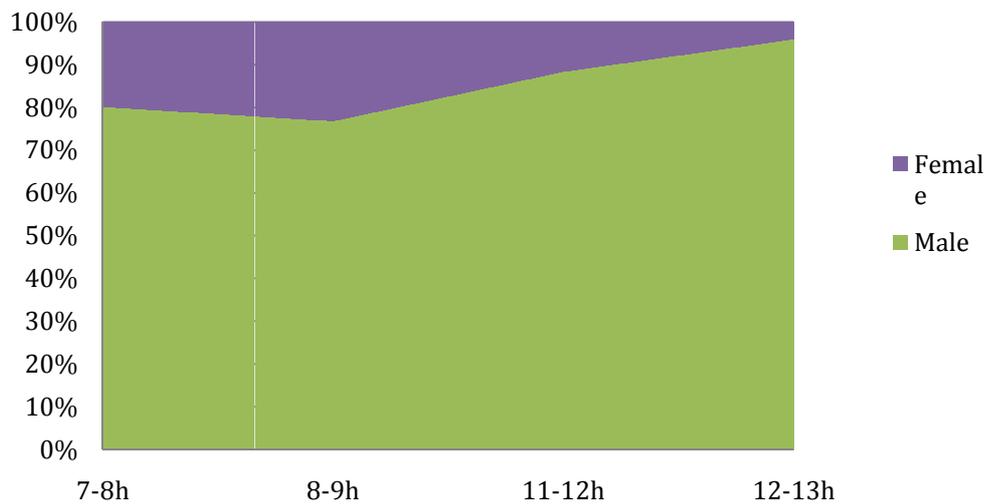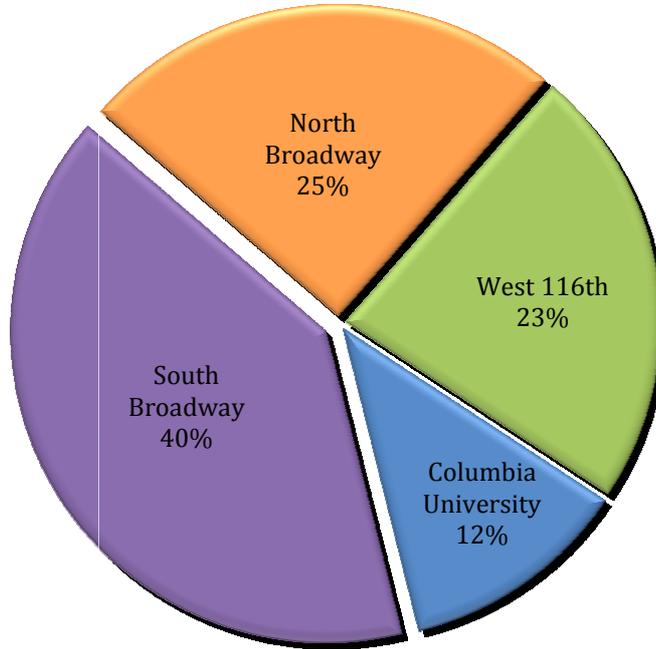
Columbia University 22%
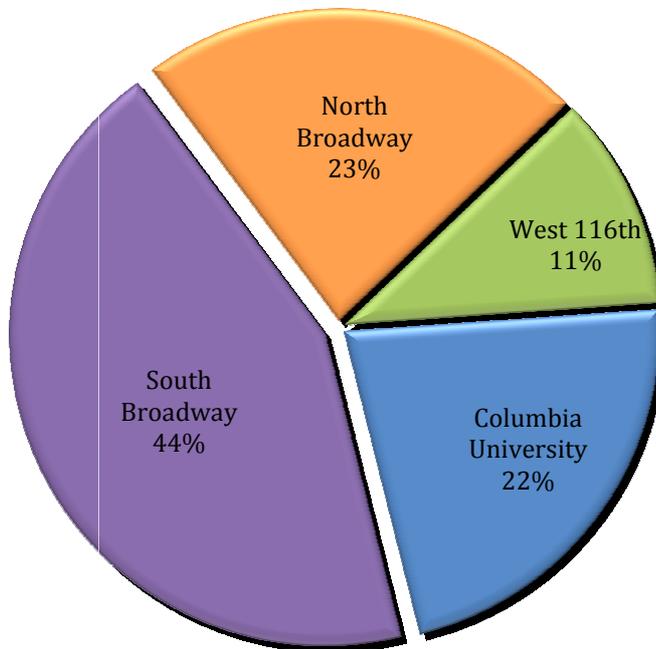
Trip Analysis:
Delivery/Exercise/Commute

Exercise
1%

Commuting
72%

Delivery
27%

Delivery, with
normal bike
19%

Delivery, with
electirc bike
8%

Helmet Usage

Women

Men

■ Helmet

■ No Helmet

0   20   40   60   80   100   120   140
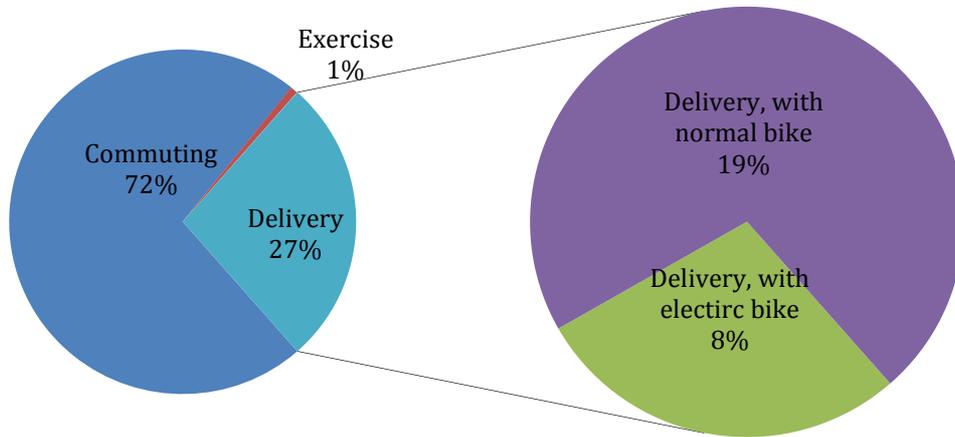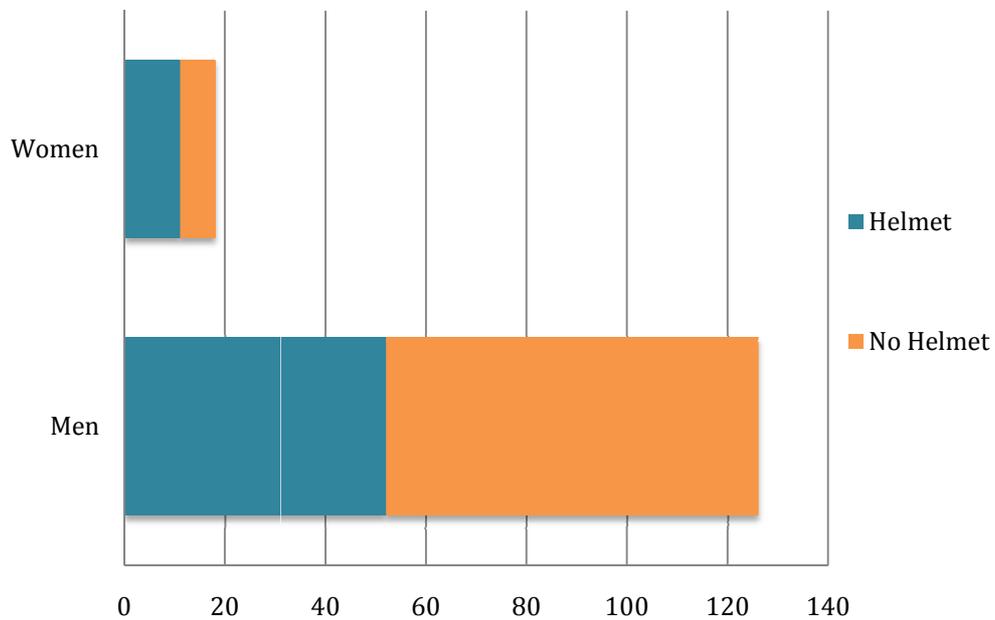
2. Photographs

144 cyclists in 12hours
Average of 36 cyclists per hour

49 going to/coming from Columbia University   **17%**

69 going to/coming from Broadway (North),   24%
121 going to/coming from Broadway (South),   42 %

49 going to/coming from 116th Street, 17%

116 & Broadway – Manhattan
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126 men,   88%

18 women,   12%

2 children riding in seats

5 seniors*,   3%

*This is an estimated number. We cannot be certain whether the people we observed are over 65.

39 Delivery,   27%

Being:

28 normal, 19% of total   / 71% of delivery

11electric bikes, 7% of total   /   28% of delivery

63 use helmets,   43%

1   With cycling clothing,   .6 %

1 Tandem bike,   .6 %

4 Scooters,   2.4 %

1 Skateboard (not included in count)

3. Just the numbers:

		7-8h	8-9h	11-12h	12-13h	Total
Destination	S. Broadway	10	11	23	19	63
	N. Broadway	4	5	10	14	33
	West 116th	0	7	3	6	16
	Columbia University	1	7	15	9	32
	Total	15	30	51	48	144
Origin	S. Broadway	5	14	17	22	58
	N. Broadway	6	10	13	7	36
	West 116th	1	4	15	13	33
	Columbia University	3	2	6	6	17
	Total	15	30	51	48	144
Delivery	Male	2	3	12	22	39
	Female	0	0	0	0	0
	Total	2	3	12	22	39
Electric Bike	Male	0	0	5	6	11
	Female	0	0	0	0	0
	Total	0	0	5	6	11
Cycling Clothing	Male	0	0	0	1	1
	Female	0	0	0	0	0
	Total	0	0	0	1	1
Helmet	Male	10	16	14	12	52
	Female	2	6	2	1	11
	Total	12	22	16	13	63
No Helmet	Male	2	7	31	34	74
	Female	1	1	4	1	7
	Total	3	8	35	35	81
		7-8h	8-9h	11-12h	12-13h	Total
Sex	Male	12	23	45	46	126
	Female	3	7	6	2	18
	Total	15	30	51	48	144

This bicycle count was carried out using methodology created by the
Associação Transporte Ativo

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