

SLOW DOWN

A STUDY OF SPEEDING ON MCGUINNESS BLVD



TRANSPORTATION
ALTERNATIVES

ACKNOWLEDGEMENTS

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This report would not have been possible without the time and effort of the members of the McGuinness Boulevard Working Group. Members of the McGuinness Boulevard Working Group identified the survey locations and collected the data, using radar guns to measure vehicle speeds.

MCGUINNESS BOULEVARD WORKING GROUP

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INTRODUCTION



MCGUINNESS BOULEVARD IS A NORTH/SOUTH FOUR-LANE ARTERIAL STREET stretching over one mile through the heart of Greenpoint, Brooklyn. McGuinness Boulevard has two lanes of traffic in either direction and connects the Queens-Midtown-Expressway (I-495) via the Pulaski Bridge to the Brooklyn-Queens-Expressway. But far too many motorists seem to have forgotten that there's a community that lives along the road.

McGuinness Boulevard is a notorious corridor for motor vehicles traveling at extremely dangerous speeds, leading to numerous severe injuries and deaths. According to data from the New York State Department of Transportation, from 2005-2009 there were 57 crashes involving motorists crashing into pedestrians or bicyclists, an average of nearly one crash per month. Of the 57 crashes, 44 involved pedestrians--resulting in one pedestrian death. The remaining 13 crashes involved bicyclists and resulted in three bicyclist deaths. In the Pedestrian Safety Study and Action Plan released in August 2010, the New York City Department of Transportation found that pedestrian fatalities occur disproportionately along multi-lane streets and avenues, like McGuinness Boulevard, and that speeding, driver inattention and failure to yield are the underlying factors behind the vast majority of pedestrian fatalities or serious injury.

The McGuinness Boulevard Working Group (MBWG), a coalition of Transportation Alternatives, Neighbors Allied for Good Growth, Community Board 1 and concerned residents, was formed to explore what could be done to make McGuinness Boulevard safer for everyone. Major concerns of the MBWG include speeding by passenger vehicles and large trucks, which may be caused by the timing of the signals along the corridor. An additional concern is the high incidence of pedestrians crossing against the signal, which may be attributed to impatience due to lengthy wait times for the "Walk" light. The combination of vehicles traveling at high speeds and pedestrians crossing against the signal creates a deadly situation.

The MBWG group seeks to work with the New York City Department of Transportation to address signal timing and the New York City Police Department, specifically the 94th Precinct, to address enforcement and bring attention to the speed-related issues on McGuinness Boulevard and collaborate to find solutions. In an effort to gather quantitative data about existing conditions on McGuinness Boulevard, the MBWG conducted a series of weekday and weekend speed surveys. This report outlines the findings.

RESULTS

THE SPEED LIMIT ON MCGUINNESS BOULEVARD, LIKE ALL NEW YORK CITY STREETS IS 30 MPH. The McGuinness Boulevard Working Group found that **66.25 percent** of all motorists on McGuinness Boulevard exceeded the speed limit. The highest recorded percentage of motorists traveling over the speed limit was 75 percent, which occurred on a weekday. Over the duration of the four speed surveys, the fastest motorist was traveling **50 mph** in a 30 mph zone on a weekday. The result of the speed survey confirms the concerns of Greenpoint residents and illustrates a glaring need for enforcement of the 30 mph speed limit.

	SPEED SURVEY: WEEKDAY EVENING 02/28/2012	SPEED SURVEY: WEEKDAY AFTERNOON 03/07/2012	SPEED SURVEY: WEEKDAY AFTERNOON 03/08/2012	SPEED SURVEY: WEEKDAY EVENING 03/10/2012	AVERAGE
TOTAL CARS SURVEYED	268	172	188	224	213
PERCENT EXCEEDING THE SPEED LIMIT	53%	75%	70%	67%	66.25%
FASTEST SPEED RECORDED	47 mph	49 mph	50 mph	49 mph	N/A
10 MPH PACE	27-36 mph	28-37 mph	29-38 mph	28-37 mph	N/A
PERCENT IN PACE	63%	79%	68%	72%	70.5%
PERCENT TRAVELING 5 MPH ABOVE SPEED LIMIT	26%	45%	44%	31%	36.5%

RESULTS

The 10-mph pace represents the highest percentage of vehicles traveling in a 10 mph speed range (for example, 26 to 35 mph). Typically, the midpoint of the 10-mph pace corresponds with the average (mean) speed of the roadway. The 10-mph pace can help determine if there is a uniform speed of traffic flow on a roadway. On McGuinness Boulevard, there is a uniform speed. Unfortunately, it's well above the speed limit. The highest 10-mph pace recorded was 29-38 mph, further illustrating a need for enforcement on McGuinness Boulevard.

The MBWG found that on average **36.5 percent** of all motorists on McGuinness Boulevard were traveling 5 mph or more over the speed limit. The highest single survey finding illustrated 45 percent of motorists traveling more than 5 mph over the speed limit on a weekday.

COMMERCIAL TRUCK ANALYSIS

	CUMULATIVE OF ALL SURVEYS CONDUCTED
TOTAL CARS SURVEYED	61
PERCENT EXCEEDING THE SPEED LIMIT	62%
FASTEST SPEED RECORDED	47 mph
10 MPH PACE	28-37 mph
PERCENT IN PACE	74%
PERCENT TRAVELING 5 MPH ABOVE SPEED LIMIT	34%

COMMERCIAL TRUCKS ARE MANY TIMES HEAVIER THAN SMALLER PICKUPS AND SEDANS, which means that when they are involved in collisions, they strike with many times more force. The faster a truck travels, the more likely the crash will result in serious injuries or fatalities. Since commercial big rigs are bigger and heavier than other motor vehicles, they are also harder to maneuver. The faster a truck is going, the more time it will take the truck to move out of the way of an obstacle and the less time the driver will have time to react to an emergency situation. The weight of commercial big rigs also means that it takes much more time to come to a complete stop. If the average commercial big rig is traveling at 35 mph it will require 243 feet or two-thirds of a football field to come to a complete stop.

Surveyors recorded 61 commercial big rig trucks over the duration of the study. The McGuinness Boulevard Working Group found that 62 percent of all trucks were exceeding the speed limit. The fastest big rig recorded was traveling at an alarming 47 mph. At that speed, a big rig would require 346 feet to reach a full stop, well over the full length of a football field. Equally as alarming, the MBWG found that 34 percent of all trucks were traveling 5 mph or more above the speed limit.

MOVING FORWARD: RECOMMENDATIONS

AS MENTIONED IN THE INTRODUCTION, the *Pedestrian Safety Study and Action Plan* found that speeding, along with driver inattention and failure to yield are the underlying factors behind the vast majority of pedestrian fatalities or serious injury crashes citywide. The McGuinness Boulevard Working Group has illustrated through this survey that speeding on McGuinness Boulevard is a major problem endangering the well-being of Greenpoint residents. This survey is a first step in raising awareness of the issue that will continue to endanger New Yorkers unless it is addressed. The epidemic of speeding commercial big rigs must be addressed. They impose significant danger on all users of McGuinness Boulevard. Without police enforcement, truck drivers will continue to endanger local residents with impunity.

Our results show that the highest speeds on McGuinness Boulevard are exhibited on weekday afternoons and weekend evenings. This is when sidewalks and intersections are typically busiest. Children are getting out school during the day and evenings draw larger volumes of pedestrians and bicyclists run errands or return home. Decreased visibility at night only complicates the issue. The fact that excessive speeds coincide with high pedestrian and bicyclist activity is a recipe for disaster that has ended with the worst possible outcome -- death -- four times in the last five years.

Since the NYPD has limited resources to enforce existing traffic laws, automated enforcement devices, such as speed cameras and red light cameras, can help catch many of the moving violations that are difficult to control through traditional traffic enforcement techniques. Because New York State Law requires authorization from the State Legislature in Albany to implement automated enforcement in New York City, efforts to fully implement this commonsense tool have been stifled. Although the City is currently authorized to operate 150 red light cameras, the City is not currently authorized to operate speed cameras. The McGuinness Boulevard Working Group implores the State Legislature to pass Assembly Bill 7737, the “Neighborhood Speeds for Neighborhood Streets Act.” This legislation would authorize a speed camera pilot program in New York City. Speed cameras are a low-cost, proven technology and are currently in place in over 100 American communities.

The NYPD must prioritize enforcement against driver behaviors that put pedestrians at risk. By advocating for more enforcement of existing vehicle and traffic laws, we can begin to eradicate reckless and careless driving behaviors. With these surveying efforts, the McGuinness Boulevard Working Group aims to support the NYPD in creating deterrents to dangerous driving behavior, and increase street safety for the pedestrians and bicyclists who are the most vulnerable users of our roads.

METHODOLOGY

FOR THIS STUDY, THE MCGUINNESS BOULEVARD WORKING GROUP UTILIZED THE RADAR METER METHOD. A radar meter (radar gun) is a commonly used device for directly measuring vehicle speed. The MBWG used a Bushnell Velocity speed gun capable of recording speeds from 6-200 MPH, at a distance of up to 1,500 feet.

Greenpoint community members voiced concerns about vehicle speeds in the afternoon and evenings. Due to high vehicle volumes on McGuinness Boulevard between 7 am and 10 am and again between 4 pm and 7 pm, speeding is less likely during these peak travel times. Based on input from the community, a total of four speed surveys were conducted on McGuinness Boulevard between Norman and Nassau avenues. The MBWG conducted two weekday surveys (1:00 pm -- 2:30 pm), one weekday evening survey (7:00 pm -- 8:00 pm) and one weekend evening survey (7:00 pm -- 8:30 pm).

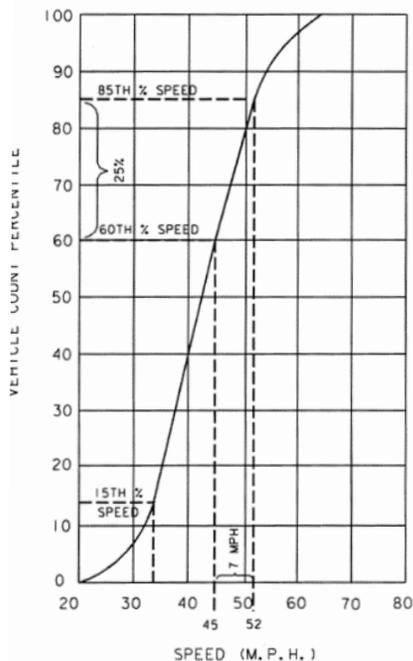
SELECTION STRATEGY

SURVEYORS WERE ASKED TO STAND MID-BLOCK allowing motorists ample time and distance to accelerate away from the previous signal. Data was only collected from motorists traveling at “free-flow” speed. Free-flow speed is the term used to describe the average speed that a motorist would travel if there was no congestion or other adverse conditions, such as bad weather. Speed data was typically collected from the first car in a fleet approaching a green light or individual cars mid-cycle that was preceded by a five second or greater gap. Vehicles slowing to execute left or right turns and vehicles approaching a red light were excluded.

McGuinness Boulevard is a wide four-lane roadway with a median dividing traffic. In an effort to collect accurate data, surveyors were asked to spend half their time collecting data from vehicles traveling in one direction, then cross the street and collect data from vehicles traveling in the opposite direction.

Speeding by commercial or big rig trucks is a concern of Greenpoint residents. Whenever a commercial or big-rig truck met the selection strategy and was recorded, surveyors were asked to mark a “T” next to the speed so analysis could be done later.

GLOSSARY



85TH PERCENTILE: The 85th percentile speed is a well-recognized value that is important in speed studies. This value shows the speed at which 85 percent of the vehicles are traveling at or below. This is also the speed that is typically used to set speed limits, since experience has shown that a speed limit near this value is the maximum safe and reasonable speed for a roadway. This value is most often used to describe a speed study, because it's easy for the public and elected officials to understand. However, this data alone does not give a complete understanding of traffic speeds on a roadway and, in particular, it does not address the percentage of outlying speeds that residents are often concerned with.

50TH PERCENTILE: The 50th percentile is the median speed of the observed data set. This percentile represents the speed at which half of the observed vehicles are below and half of the observed vehicles are above.

15TH PERCENTILE: Most cumulative speed distribution curves “break” at approximately 15 percent and 85 percent of the total number of observations (see figure below). Consequently, the motorists observed in the lower 15 percent are considered to be traveling unreasonably slow and those observed above the 85th percentile value are assumed to be exceeding a safe and reasonable speed.

AVERAGE SPEED: This number is the statistical average. All speeds were added then divided by the number of vehicles counted.

10 MPH PACE: The 10-mph pace represents the highest percentage of vehicles traveling in a 10-mph speed range (for example, 25 to 35 mph). Typically, the midpoint of the 10-mph pace corresponds with the average (mean) speed of the roadway. The 10-mph pace can help determine if there is a uniform speed of traffic flow on a roadway, which results in increased safety. However, similar to the 85th percentile speed, this method does not take outlying speed data into account.

PERCENT IN PACE: The percentage of motorists traveling within the 10 mph Pace.

PERCENT OVER PACE: The percentage of motorists traveling above the 10 mph Pace.

PERCENT UNDER PACE: The percentage of motorists traveling under the 10 mph Pace.

PERCENT EXCEEDING THE SPEED LIMIT: The speed limit in New York City is 30 mph unless otherwise posted. For this study, any motorist traveling 31 mph or greater was considered to be exceeding the speed limit.

PERCENT OF VEHICLES TRAVELING 5 MPH ABOVE THE SPEED LIMIT: This method calculates the percentage of vehicles that are traveling at speeds 5 mph above the posted speed limit. It provides a fairly simple way of understanding the outlying speed data on a street.



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