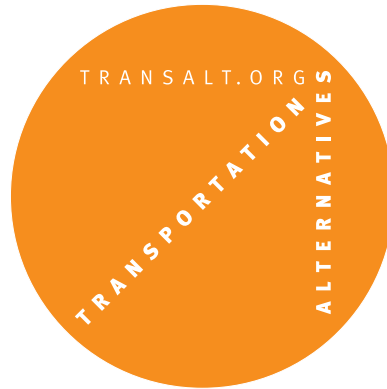


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# Terminal Velocity

## New York City's Speeding Epidemic

February 2009





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## Executive Summary

In 2008, Transportation Alternatives researchers recorded motorist speeds at 13 locations in all five boroughs. These surveys were prompted by community complaints, as well as dangerous corridors identified through NY State Department of Motor Vehicle crash records on Crashstat.org. Using automated speed cameras and radar guns, the same equipment used by law enforcement professionals around the country, T.A. researchers measured the speeds of more than 15,000 motorists.

Speeding is endemic on New York City streets. It is the primary factor in more than 2,300 motor vehicle crashes in the city each year—three times the number of alcohol-related collisions. For every additional mile per hour driven over the 30 mph speed limit, the likelihood of a crash becoming fatal increases exponentially. At a speed of 30 mph, 40% of pedestrians who are struck will be killed, but at 40 mph, the likelihood of a fatal crash jumps to 70%.

The study's results show a staggering level of traffic crime that directly contributes to the deaths of pedestrians, bicyclists, drivers and passengers each year—a problem the City does not currently measure in the same way as violent crimes. The study yielded the following results:

- **Citywide, 39% of motorists are driving above the 30 mph citywide speed limit.**
- In Manhattan, 70% of drivers on East Houston Street speed through a school zone.
- In the Bronx, 32% of drivers on Webster Avenue speed past a school as fast as 66 mph.
- In Queens, 32% of drivers on Northern Boulevard speed through a busy commercial area, past a school and police station.
- In Brooklyn, 88% of drivers on Rogers Avenue in Prospect Lefferts Gardens speed, with 25% exceeding 40 mph.
- On Hylan Boulevard, Staten Island's most dangerous street, 39% of drivers exceed the speed limit, reaching fatal speeds over 60 mph.

Lax enforcement of moving violations and street design that encourage fatal speeds are prime contributors to New York City's speeding epidemic. To reduce speeding, the study makes the following recommendations:

- **Install speed enforcement cameras.** The New York State Legislature must empower New York City to install these simple, proven, cost-effective tools to reduce motorist speeds, save lives and tame traffic.
- **Gather data on speeding and other traffic crimes.** The NYPD currently only records the number of tickets issued to speeding drivers, which can be completely unrelated to the underlying problem and rewards the writing of tickets rather than the reduction of traffic crime.
- **Design streets for lower speeds.** Outdated street geometry encourages speeding with excess lanes and intersection design that lets drivers make turns at high speeds. Several City agencies can help design lower speeds into streets. Through traffic calming, fatalities can be dramatically reduced.



## Methodology

Transportation Alternatives researchers conducted surveys at 13 locations in all five boroughs and recorded more than 15,000 motorist speeds. Locations for the collection of speeding data were based on two main factors:

- Complaints about speeding and reckless driving from Transportation Alternatives members, community partners and the general public
- Prevalence of pedestrians and cyclists injured or killed by motor vehicle crashes, identified using crash data on Crashstat.org which includes crash data for 1995 to 2005 from the New York State Department of Transportation.

### The locations selected were:

#### The Bronx

Webster Avenue at 195th Street

#### Manhattan

East Houston Street at Avenue C

65th Street Central Park Transverse

#### Brooklyn

Flushing Avenue at Tompkins Avenue

Franklin Avenue at Monroe Street

Bedford Avenue at Myrtle Avenue

Bedford Avenue at Flushing Avenue

Bedford Avenue at DeKalb Avenue

Flatbush Avenue at Washington Avenue

Flatbush Avenue at Empire Boulevard

Rogers Avenue at Maple Street

#### Queens

Northern Boulevard at Junction Boulevard

#### Staten Island

Hylan Boulevard at New Dorp Lane

Date	Time	Site	Speed	Direction	Sign speed	Radar
2008-11-14	15:25:02.3		57.6 mph	Arriving	30 mph	A7BD760E0000
Distance	Operator	D1	D2	T	PicNO	
110.0 ft		0.0 ft	0.0 ft	0.00 s	260A	



T.A. staff and researchers were assigned to each of these locations between the hours of 7:00 AM and 9:00 PM to record motorist speeds for a minimum of 30 minutes or to reach a sample size of 100 motorist speeds. Motorist speeds were recording using either a hand-held radar gun, the same type used by law enforcement professionals around the country, or using a speeding enforcement camera to automatically measure and document vehicle speeds.

At each survey location, researchers were assigned a specific position from which to record motorist speeds. Positions were located based on the following criteria:



- Position poses no danger or conflict to researchers, their equipment or any road user (motorist, bicyclist, pedestrian, etc).
- Position is inconspicuous to motorists and other road users to avoid drawing attention that could affect motorist behaviors
- Motorists are driving nearly directly towards or away from survey position for the most accurate record.

During each survey, researchers recorded qualitative and anecdotal observations of factors that may have influenced motorist behavior (weather condition, congestion, crash, illegal double parking, etc.). Additionally, where high traffic volumes prevented researchers from recording every motorist speed with the hand-held radar gun, the measurement pattern used to record speeding was explained in detail (record speeding of all cars, all cars in a particular lane, every other car in a particular lane, every third car, etc.).

## **Recommendations**    **Install speed enforcement cameras**

Speeding is a contributing factor in 31% of all crashes nationwide. Speed enforcement cameras are already widely used around the United States and Western Europe where they are proven to reduce traffic injuries, deaths and crashes. Transportation Alternatives has long advocated for the use of speed enforcement cameras, along with other automated enforcement technology, as a common-sense way to restore order and safety to New York City's streets. Speed enforcement cameras are efficient and cost-effective, enforcing traffic laws non-stop without discrimination and freeing up police officers to focus on more serious crime that cannot be automatically enforced. The New York State Legislature must pass a law enabling New York City to implement speed enforcement cameras.

### **Measure the problem**

The NYPD currently gathers no data on the state of speeding or other traffic crime in New York City. The only data recorded are the number of summonses issues, which may be completely disconnected from the underlying problem and levels of infraction. Without any knowledge about the state of traffic crime on city streets, the NYPD is rewarding the writing of tickets, rather than the reduction of traffic crime. Gathering comprehensive statistics on speeding, along with other traffic crimes, would help the NYPD better understand the problem and more effectively use enforcement technology and strategies to curb the problem.

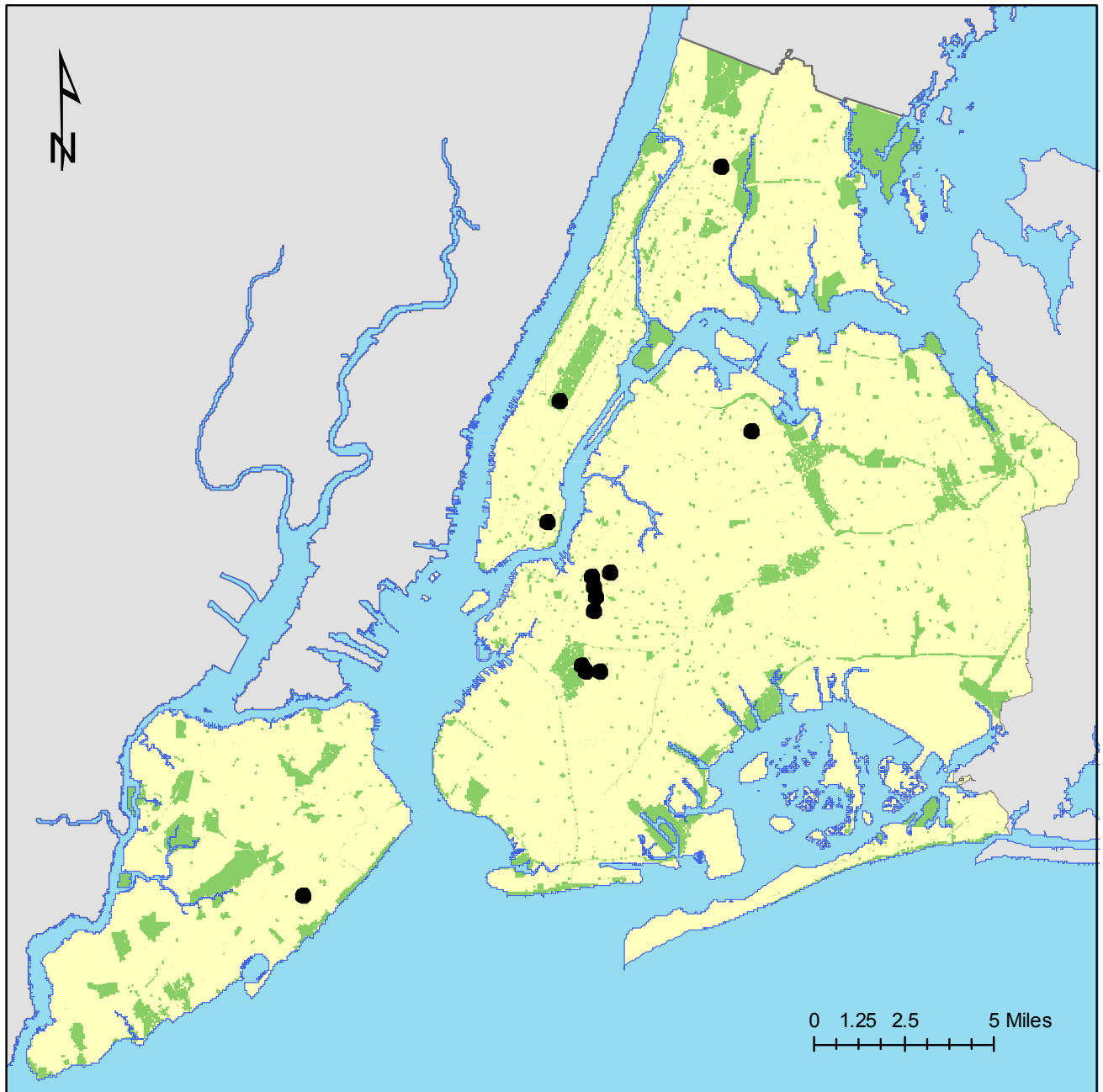
### **Design streets for lower speeds**

Outdated street designs encourage speeding and reckless driving on New York City streets with excess lanes and wide intersections that allow drivers to make high speed turns. To remedy this dangerous problem, City agencies under Mayoral leadership must focus on creating Complete Streets: streets that are safe for everyone and prioritize the safety of the most vulnerable users: pedestrians and cyclists. Fatalities can be dramatically reduced, and safety and livability improved by designing streets for lower speeds using traffic calming. Traffic calming includes a set of street designs and laws that slow and reduce traffic while encouraging walkers and cyclists to share the street. Behind traffic calming is the belief that streets are valuable public spaces that should be shared equally by all users. Traffic calming devices are simple, inexpensive, self-enforcing, and easily modified to accommodate emergency vehicles, garbage trucks and buses.

**Figure 1. Citywide Totals**

<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	2	2	0.01%	0.01% over 60 mph
<b>56 to 60</b>	2	4	0.01%	0.03% over 55 mph
<b>51 to 55</b>	14	18	0.09%	0.12% over 50 mph
<b>46 to 50</b>	112	130	0.74%	0.86% over 45 mph
<b>41 to 45</b>	582	712	3.84%	4.69% over 40 mph
<b>36 to 40</b>	1876	2588	12.37%	17.06% over 35 mph
<b>31 to 35</b>	3343	5931	22.04%	<b>39.10% over 30 mph</b>
<b>26 to 30</b>	4149	10080	27.36%	66.46% over 25 mph
<b>21 to 25</b>	3067	13147	20.22%	86.68% over 20 mph
<b>16 to 20</b>	1475	14622	9.73%	96.41% over 15 mph
<b>11 to 15</b>	453	15075	2.99%	99.39% over 10 mph
<b>10 and under</b>	92	15167	0.61%	100.00% over 0 mph
<b>Top Speed</b>	66 mph			

**Survey Locations: Citywide**

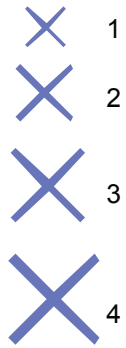


**Figure 2. Webster Avenue at 195th Street, Bronx, New York**

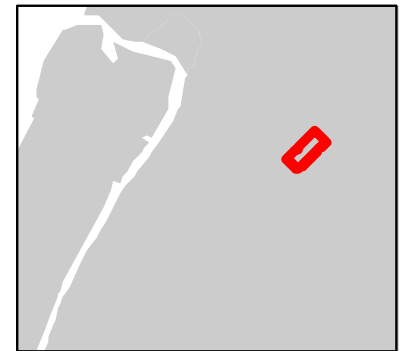
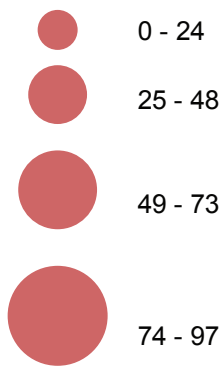
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	1	1	0.04%	0.04% over 60 mph
<b>56 to 60</b>	1	2	0.04%	0.07% over 55 mph
<b>51 to 55</b>	2	4	0.07%	0.15% over 50 mph
<b>46 to 50</b>	9	13	0.33%	0.48% over 45 mph
<b>41 to 45</b>	81	94	3.00%	3.48% over 40 mph
<b>36 to 40</b>	211	305	7.81%	11.29% over 35 mph
<b>31 to 35</b>	553	858	20.47%	<b>31.75% over 30 mph</b>
<b>26 to 30</b>	1008	1866	37.31%	69.06% over 25 mph
<b>21 to 25</b>	679	2545	25.13%	94.19% over 20 mph
<b>16 to 20</b>	128	2673	4.74%	98.93% over 15 mph
<b>11 to 15</b>	25	2698	0.93%	99.85% over 10 mph
<b>10 and under</b>	4	2702	0.15%	100.00% over 0 mph
<b>Top Speed</b>	66 mph			



Bicycle/Pedestrian Fatalities



Bicycle/Pedestrian Injuries



**Webster Avenue (between 187th Street and Bedford Park Blvd), Bronx, NY**

Fatalities: 4 total (4 pedestrians, 0 bicyclists)

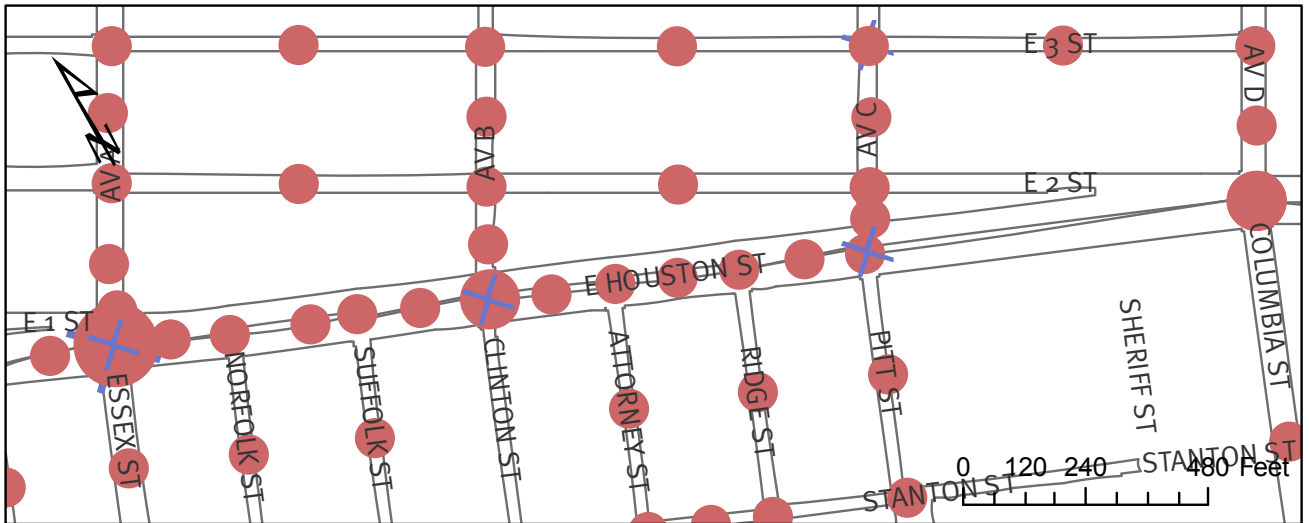
Injuries: 284 total (246 pedestrians, 38 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

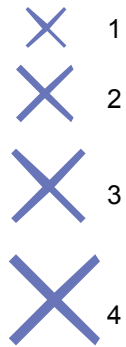
Source: NYS DOT

**Figure 3. East Houston Street at Avenue C, Manhattan, New York**

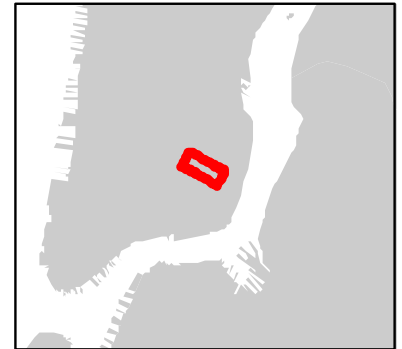
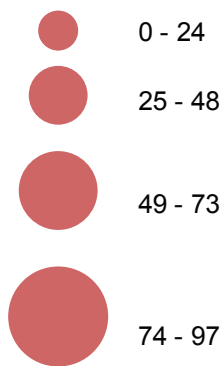
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	0	0	0.00%	0.00% over 60 mph
<b>56 to 60</b>	1	1	0.04%	0.04% over 55 mph
<b>51 to 55</b>	7	8	0.26%	0.30% over 50 mph
<b>46 to 50</b>	68	76	2.51%	2.81% over 45 mph
<b>41 to 45</b>	255	331	9.42%	12.23% over 40 mph
<b>36 to 40</b>	721	1052	26.64%	38.88% over 35 mph
<b>31 to 35</b>	831	1883	30.71%	<b>69.59% over 30 mph</b>
<b>26 to 30</b>	502	2385	18.55%	88.14% over 25 mph
<b>21 to 25</b>	239	2624	8.83%	96.97% over 20 mph
<b>16 to 20</b>	72	2696	2.66%	99.63% over 15 mph
<b>11 to 15</b>	9	2705	0.33%	99.96% over 10 mph
<b>10 and under</b>	1	2706	0.04%	100.00% over 0 mph
<b>Top Speed</b>	57 mph			



Bicycle/Pedestrian Fatalities



Bicycle/Pedestrian Injuries



**East Houston Street (between Allen and FDR Drive), NY, NY**

Fatalities: 14 total (12 pedestrians, 2 bicyclists)

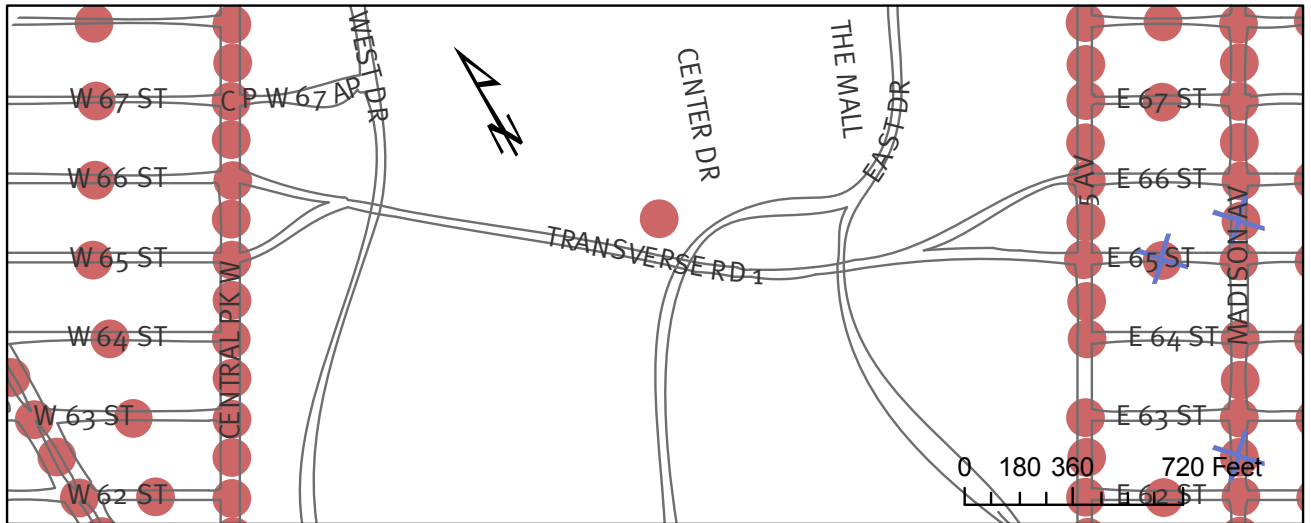
Injuries: 561 total (375 pedestrians, 187 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

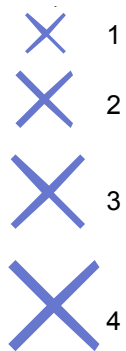
Source: NYS DOT

**Figure 4. 65th Street Central Park Transverse, Manhattan, New York**

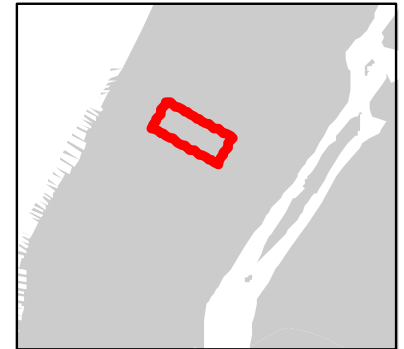
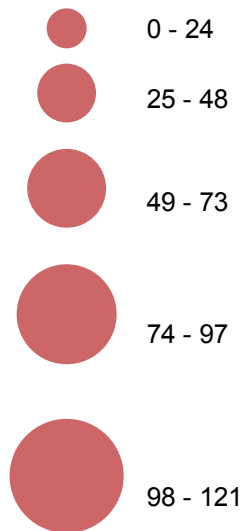
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	0	0	0.00%	0.00% over 60 mph
<b>56 to 60</b>	0	0	0.00%	0.00% over 55 mph
<b>51 to 55</b>	0	0	0.00%	0.00% over 50 mph
<b>46 to 50</b>	2	2	0.55%	0.55% over 45 mph
<b>41 to 45</b>	22	24	6.09%	6.65% over 40 mph
<b>36 to 40</b>	89	113	24.65%	31.30% over 35 mph
<b>31 to 35</b>	129	242	35.73%	<b>67.04% over 30 mph</b>
<b>26 to 30</b>	81	323	22.44%	89.47% over 25 mph
<b>21 to 25</b>	27	350	7.48%	96.95% over 20 mph
<b>16 to 20</b>	9	359	2.49%	99.45% over 15 mph
<b>11 to 15</b>	2	361	0.55%	100.00% over 10 mph
<b>10 and under</b>	0	361	0.00%	100.00% over 0 mph
<b>Top Speed</b>	47 mph			



Bicycle/Pedestrian Fatalities



Bicycle/Pedestrian Injuries



**65th Street - Central Park Transverse (between 5th Avenue and Central Park W), New York, NY**

Fatalities: 0

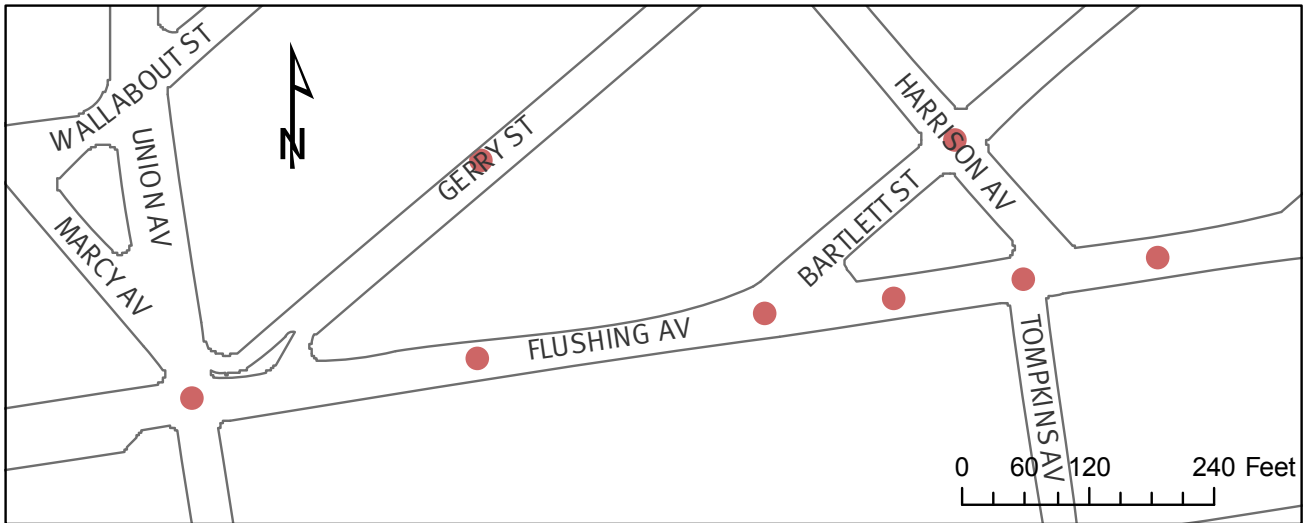
Injuries: 54 total (34 pedestrians, 20 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

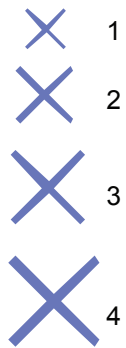
Source: NYS DOT

**Figure 5. Flushing Avenue at Tompkins Avenue, Brooklyn, New York**

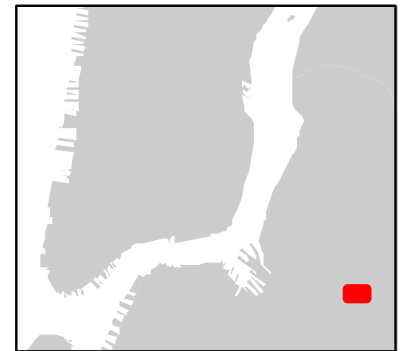
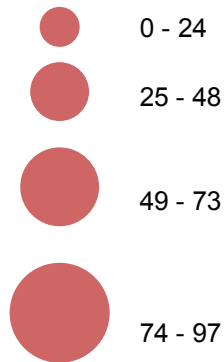
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	0	0	0.00%	0.00% over 60 mph
<b>56 to 60</b>	0	0	0.00%	0.00% over 55 mph
<b>51 to 55</b>	0	0	0.00%	0.00% over 50 mph
<b>46 to 50</b>	2	2	0.13%	0.13% over 45 mph
<b>41 to 45</b>	0	2	0.00%	0.13% over 40 mph
<b>36 to 40</b>	24	26	1.59%	1.72% over 35 mph
<b>31 to 35</b>	69	95	4.57%	<b>6.29% over 30 mph</b>
<b>26 to 30</b>	295	390	19.54%	25.83% over 25 mph
<b>21 to 25</b>	457	847	30.26%	56.09% over 20 mph
<b>16 to 20</b>	423	1270	28.01%	84.11% over 15 mph
<b>11 to 15</b>	194	1464	12.85%	96.95% over 10 mph
<b>10 and under</b>	46	1510	3.05%	100.00% over 0 mph
<b>Top Speed</b>	46 mph			



Bicycle/Pedestrian Fatalities



Bicycle/Pedestrian Injuries



**Flushing Avenue (between Broadway and Spencer Street), Brooklyn, NY**

Fatalities: 1 total (1 pedestrian, 0 bicyclists)

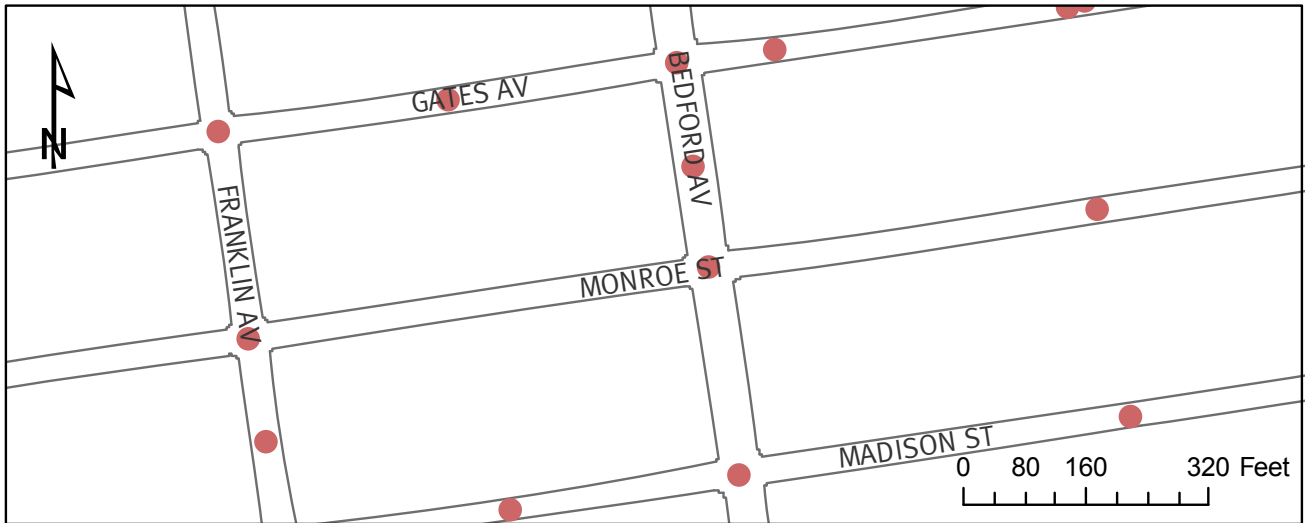
Injuries: 117 total (88 pedestrians, 29 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

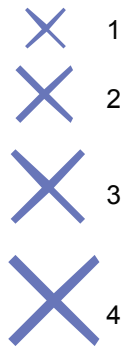
Source: NYS DOT

**Figure 6. Franklin Avenue at Monroe Street, Brooklyn, New York**

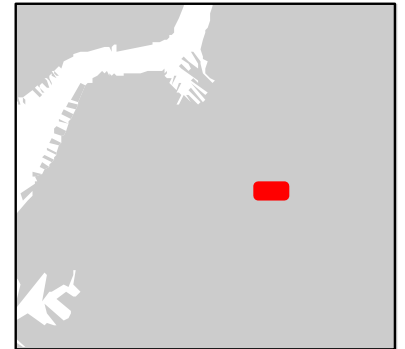
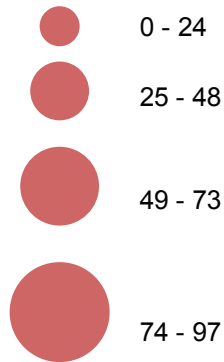
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	0	0	0.00%	0.00% over 60 mph
<b>56 to 60</b>	0	0	0.00%	0.00% over 55 mph
<b>51 to 55</b>	0	0	0.00%	0.00% over 50 mph
<b>46 to 50</b>	0	0	0.00%	0.00% over 45 mph
<b>41 to 45</b>	10	10	2.49%	2.49% over 40 mph
<b>36 to 40</b>	34	44	8.46%	10.95% over 35 mph
<b>31 to 35</b>	78	122	19.40%	<b>30.35% over 30 mph</b>
<b>26 to 30</b>	126	248	31.34%	61.69% over 25 mph
<b>21 to 25</b>	72	320	17.91%	79.60% over 20 mph
<b>16 to 20</b>	58	378	14.43%	94.03% over 15 mph
<b>11 to 15</b>	20	398	4.98%	99.00% over 10 mph
<b>10 and under</b>	4	402	1.00%	100.00% over 0 mph
<b>Top Speed</b>	42 mph			



Bicycle/Pedestrian Fatalities



Bicycle/Pedestrian Injuries



**Franklin Avenue (between Lafayette Avenue and Atlantic Avenue), Brooklyn, NY**

Fatalities: 0

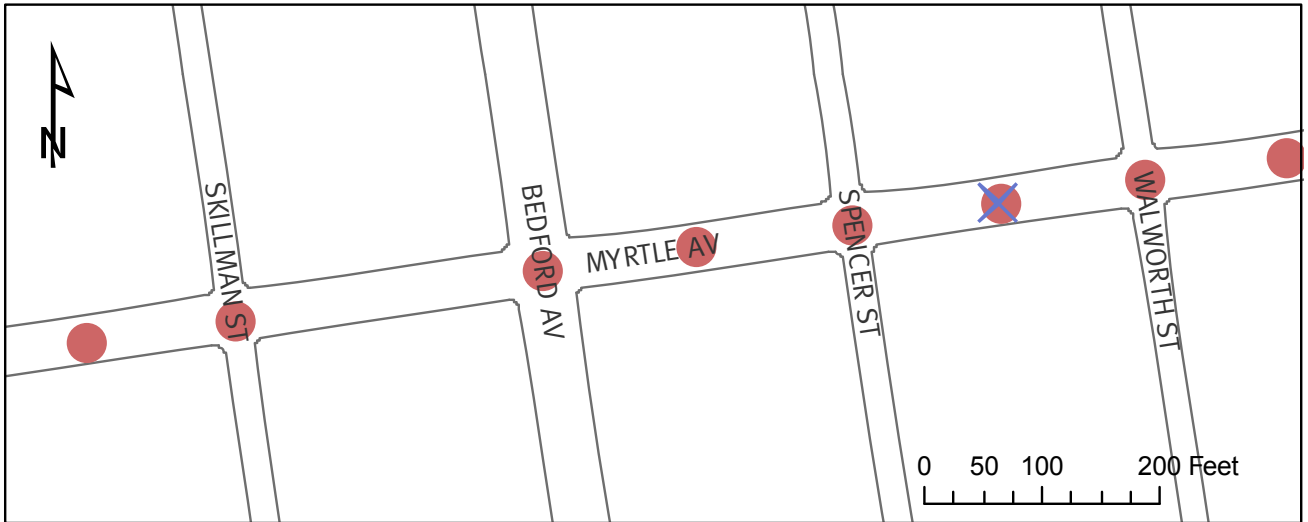
Injuries: 117 total (75 pedestrians, 42 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

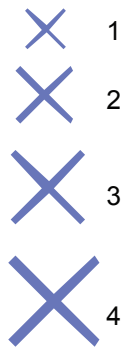
Source: NYS DOT

**Figure 7. Bedford Avenue at Myrtle Avenue, Brooklyn, New York**

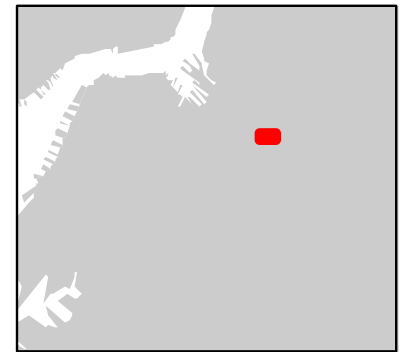
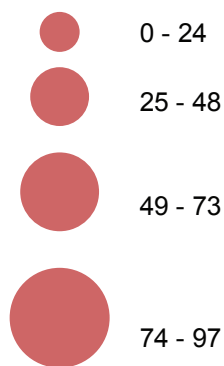
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	0	0	0.00%	0.00% over 60 mph
<b>56 to 60</b>	0	0	0.00%	0.00% over 55 mph
<b>51 to 55</b>	0	0	0.00%	0.00% over 50 mph
<b>46 to 50</b>	0	0	0.00%	0.00% over 45 mph
<b>41 to 45</b>	2	2	0.67%	0.67% over 40 mph
<b>36 to 40</b>	40	42	13.42%	14.09% over 35 mph
<b>31 to 35</b>	47	89	15.77%	<b>29.87% over 30 mph</b>
<b>26 to 30</b>	64	153	21.48%	51.34% over 25 mph
<b>21 to 25</b>	63	216	21.14%	72.48% over 20 mph
<b>16 to 20</b>	42	258	14.09%	86.58% over 15 mph
<b>11 to 15</b>	24	282	8.05%	94.63% over 10 mph
<b>10 and under</b>	16	298	5.37%	100.00% over 0 mph
<b>Top Speed</b>	43 mph			



**Bicycle/Pedestrian Fatalities**



**Bicycle/Pedestrian Injuries**



**Bedford Avenue (between Atlantic Avenue and Flushing Avenue), Brooklyn, NY**

Fatalities: 0

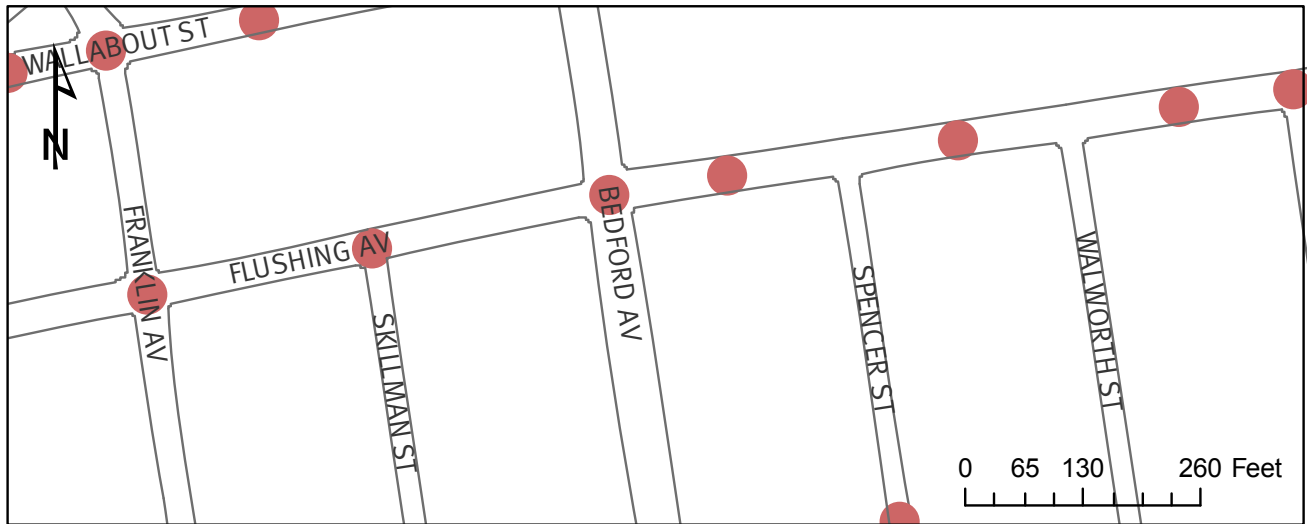
Injuries: 247 total (162 pedestrians, 85 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

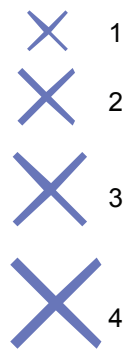
Source: NYS DOT

**Figure 8. Bedford Avenue at Flushing Avenue, Brooklyn, New York**

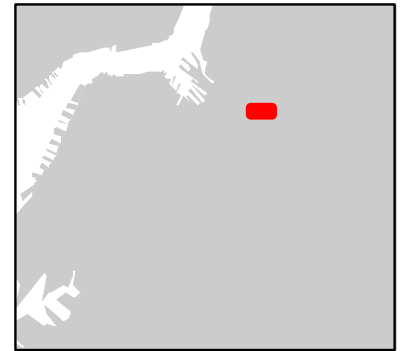
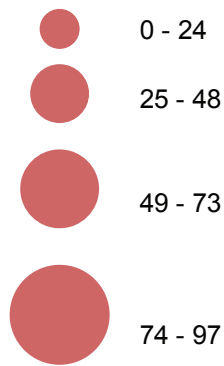
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	0	0	0.00%	0.00% over 60 mph
<b>56 to 60</b>	0	0	0.00%	0.00% over 55 mph
<b>51 to 55</b>	0	0	0.00%	0.00% over 50 mph
<b>46 to 50</b>	2	2	1.14%	1.14% over 45 mph
<b>41 to 45</b>	2	4	1.14%	2.29% over 40 mph
<b>36 to 40</b>	16	20	9.14%	11.43% over 35 mph
<b>31 to 35</b>	35	55	20.00%	<b>31.43% over 30 mph</b>
<b>26 to 30</b>	58	113	33.14%	64.57% over 25 mph
<b>21 to 25</b>	45	158	25.71%	90.29% over 20 mph
<b>16 to 20</b>	11	169	6.29%	96.57% over 15 mph
<b>11 to 15</b>	6	175	3.43%	100.00% over 10 mph
<b>10 and under</b>	0	175	0.00%	100.00% over 0 mph
<b>Top Speed</b>	47 mph			



Bicycle/Pedestrian Fatalities



Bicycle/Pedestrian Injuries



**Bedford Avenue (between Atlantic Avenue and Flushing Avenue), Brooklyn, NY**

Fatalities: 0

Injuries: 247 total (162 pedestrians, 85 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

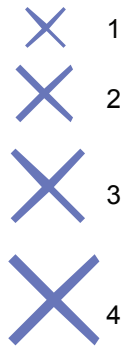
Source: NYS DOT

**Figure 9. Bedford Avenue at DeKalb Avenue, Brooklyn, New York**

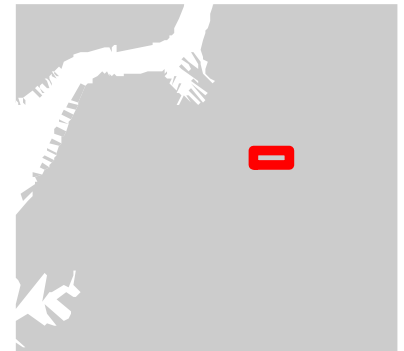
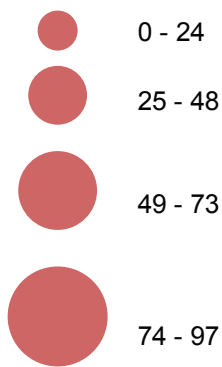
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>	
<b>Over 60</b>	0	0	0.00%	0.00%	over 60 mph
<b>56 to 60</b>	0	0	0.00%	0.00%	over 55 mph
<b>51 to 55</b>	0	0	0.00%	0.00%	over 50 mph
<b>46 to 50</b>	2	2	0.38%	0.38%	over 45 mph
<b>41 to 45</b>	14	16	2.69%	3.08%	over 40 mph
<b>36 to 40</b>	47	63	9.04%	12.12%	over 35 mph
<b>31 to 35</b>	91	154	17.50%	<b>29.62%</b>	<b>over 30 mph</b>
<b>26 to 30</b>	111	265	21.35%	50.96%	over 25 mph
<b>21 to 25</b>	101	366	19.42%	70.38%	over 20 mph
<b>16 to 20</b>	100	466	19.23%	89.62%	over 15 mph
<b>11 to 15</b>	52	518	10.00%	99.62%	over 10 mph
<b>10 and under</b>	2	520	0.38%	100.00%	over 0 mph
<b>Top Speed</b>	50 mph				



Bicycle/Pedestrian Fatalities



Bicycle/Pedestrian Injuries



**Bedford Avenue (between Atlantic Avenue and Flushing Avenue), Brooklyn, NY**

Fatalities: 0

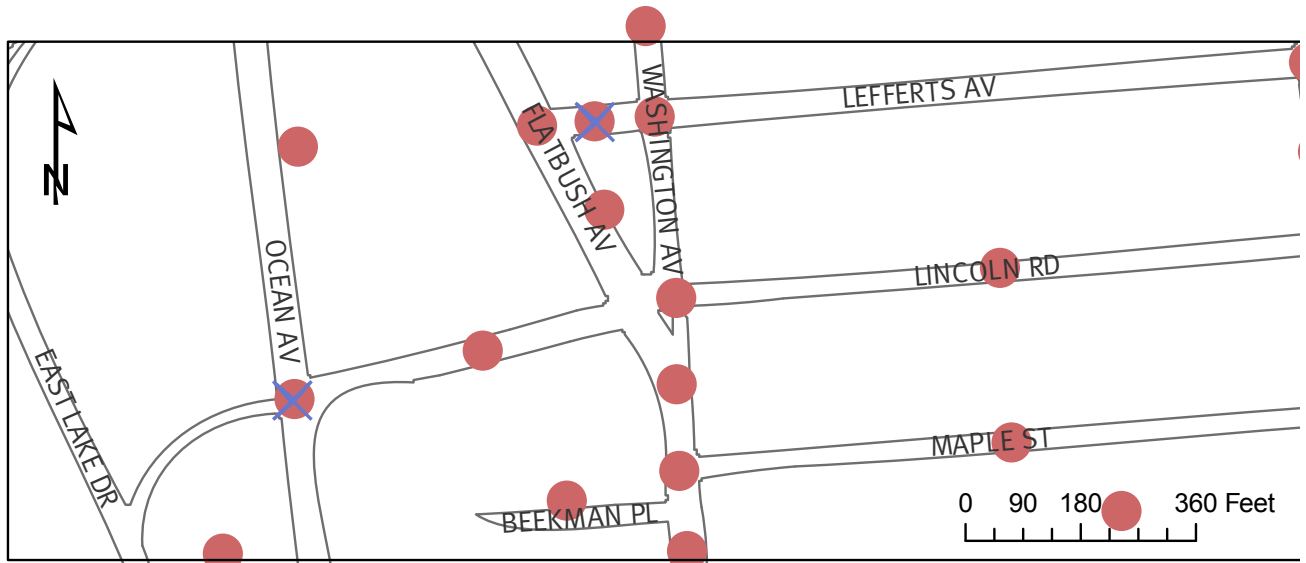
Injuries: 247 total (162 pedestrians, 85 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

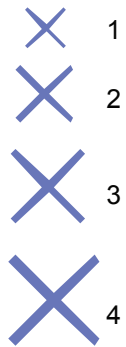
Source: NYS DOT

**Figure 10. Flatbush Avenue at Washington Avenue, Brooklyn, New York**

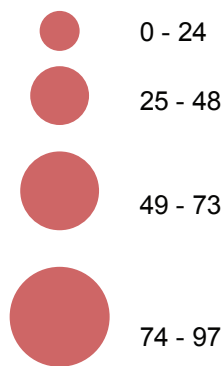
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	0	0	0.00%	0.00% over 60 mph
<b>56 to 60</b>	0	0	0.00%	0.00% over 55 mph
<b>51 to 55</b>	0	0	0.00%	0.00% over 50 mph
<b>46 to 50</b>	0	0	0.00%	0.00% over 45 mph
<b>41 to 45</b>	11	11	11.00%	11.00% over 40 mph
<b>36 to 40</b>	14	25	14.00%	25.00% over 35 mph
<b>31 to 35</b>	25	50	25.00%	<b>50.00% over 30 mph</b>
<b>26 to 30</b>	22	72	22.00%	72.00% over 25 mph
<b>21 to 25</b>	12	84	12.00%	84.00% over 20 mph
<b>16 to 20</b>	11	95	11.00%	95.00% over 15 mph
<b>11 to 15</b>	5	100	5.00%	100.00% over 10 mph
<b>10 and under</b>	0	100	0.00%	100.00% over 0 mph
<b>Top Speed</b>	44 mph			



Bicycle/Pedestrian Fatalities



Bicycle/Pedestrian Injuries



**Flatbush Avenue (between Ocean Ave and Caton Ave), Brooklyn, NY**

Fatalities: 0

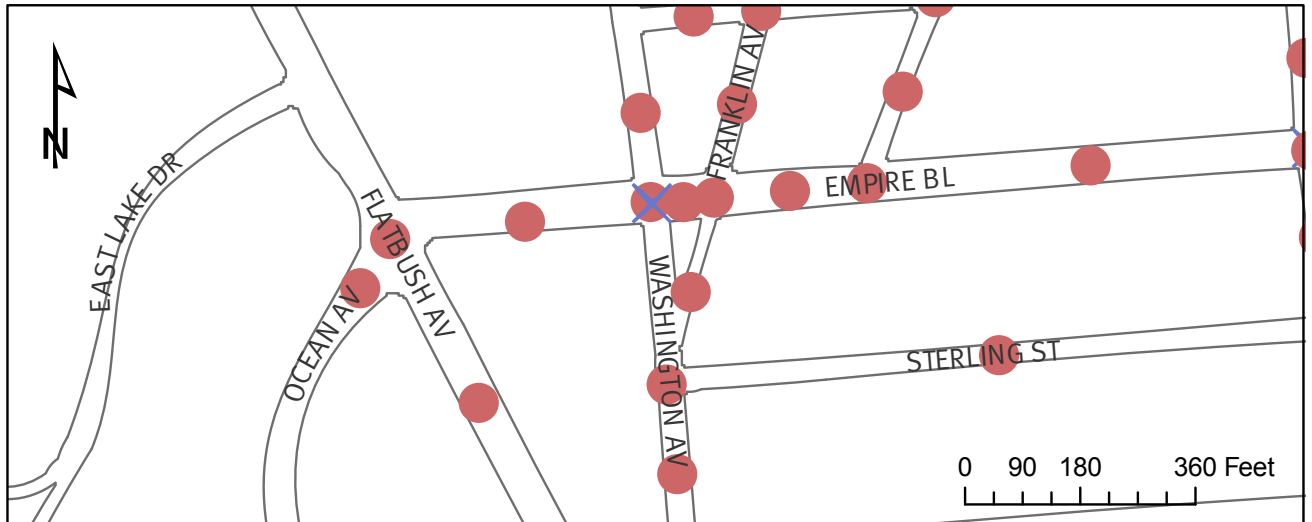
Injuries: 353 total (264 pedestrians, 89 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

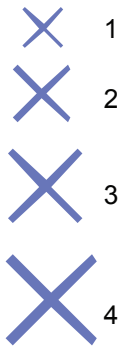
Source: NYS DOT

**Figure 11. Flatbush Avenue at Empire Boulevard, Brooklyn, New York**

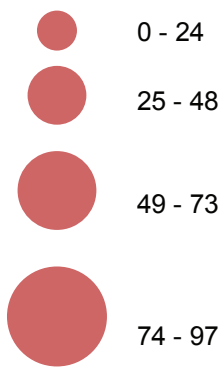
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	0	0	0.00%	0.00% over 60 mph
<b>56 to 60</b>	0	0	0.00%	0.00% over 55 mph
<b>51 to 55</b>	0	0	0.00%	0.00% over 50 mph
<b>46 to 50</b>	2	2	2.00%	2.00% over 45 mph
<b>41 to 45</b>	8	10	8.00%	10.00% over 40 mph
<b>36 to 40</b>	30	40	30.00%	40.00% over 35 mph
<b>31 to 35</b>	38	78	38.00%	<b>78.00% over 30 mph</b>
<b>26 to 30</b>	16	94	16.00%	94.00% over 25 mph
<b>21 to 25</b>	6	100	6.00%	100.00% over 20 mph
<b>16 to 20</b>	0	100	0.00%	100.00% over 15 mph
<b>11 to 15</b>	0	100	0.00%	100.00% over 10 mph
<b>10 and under</b>	0	100	0.00%	100.00% over 0 mph
<b>Top Speed</b>	47 mph			



Bicycle/Pedestrian Fatalities



Bicycle/Pedestrian Injuries



**Flatbush Avenue (between Ocean Ave and Caton Ave), Brooklyn, NY**

Fatalities: 0

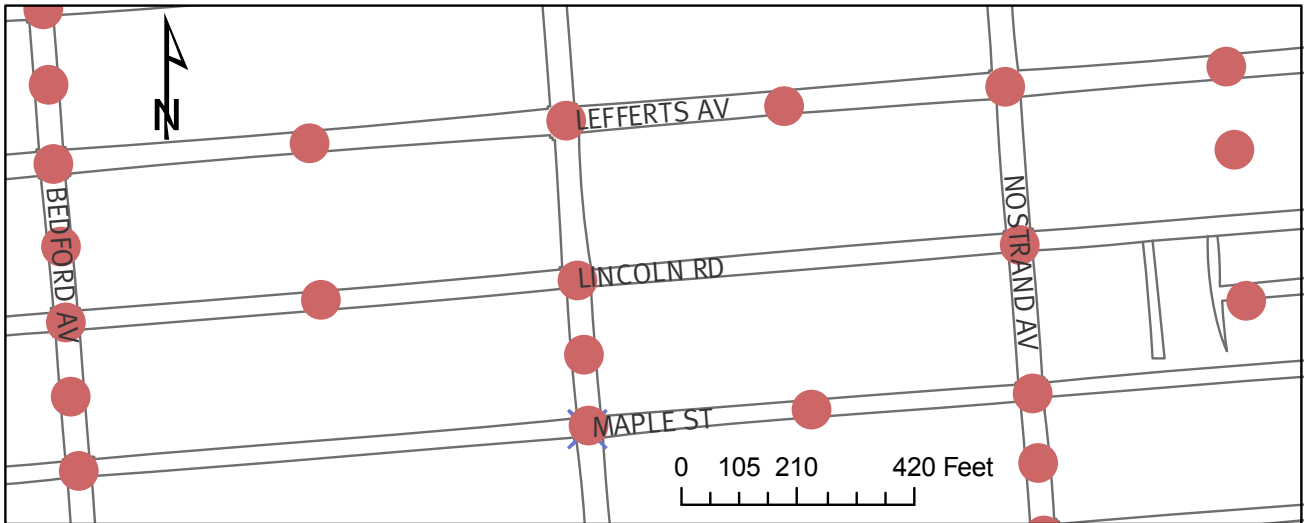
Injuries: 353 total (264 pedestrians, 89 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

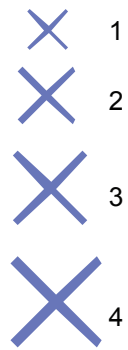
Source: NYS DOT

**Figure 12. Rogers Avenue at Maple Street, Brooklyn, New York**

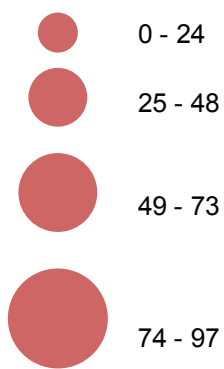
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	0	0	0.00%	0.00% over 60 mph
<b>56 to 60</b>	0	0	0.00%	0.00% over 55 mph
<b>51 to 55</b>	1	1	1.00%	1.00% over 50 mph
<b>46 to 50</b>	5	6	5.00%	6.00% over 45 mph
<b>41 to 45</b>	19	25	19.00%	25.00% over 40 mph
<b>36 to 40</b>	33	58	33.00%	58.00% over 35 mph
<b>31 to 35</b>	30	88	30.00%	<b>88.00% over 30 mph</b>
<b>26 to 30</b>	12	100	12.00%	100.00% over 25 mph
<b>21 to 25</b>	0	100	0.00%	100.00% over 20 mph
<b>16 to 20</b>	0	100	0.00%	100.00% over 15 mph
<b>11 to 15</b>	0	100	0.00%	100.00% over 10 mph
<b>10 and under</b>	0	100	0.00%	100.00% over 0 mph
<b>Top Speed</b>	51 mph			



Bicycle/Pedestrian Fatalities



Bicycle/Pedestrian Injuries



**Rogers Avenue (Linden Boulevard to Empire Boulevard), Brooklyn, NY**

Fatalities: 2 total (2 pedestrians, 0 bicyclists)

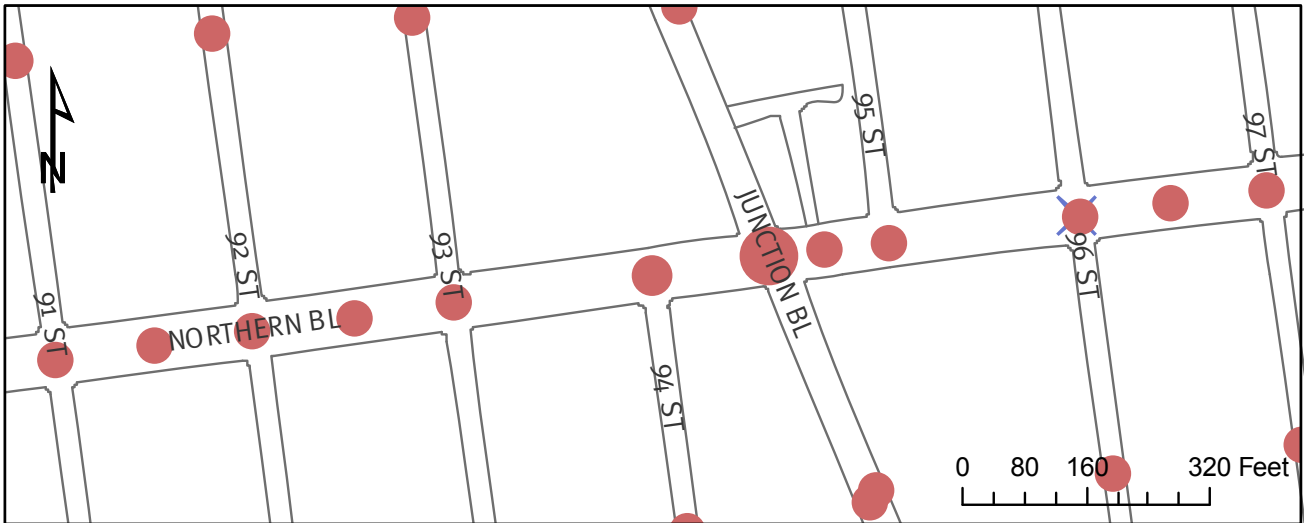
Injuries: 135 total (95 pedestrians, 40 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

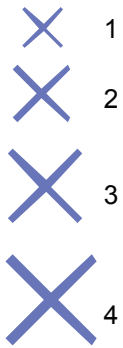
Source: NYS DOT

**Figure 13. Northern Boulevard at Junction Boulevard, Queens, New York**

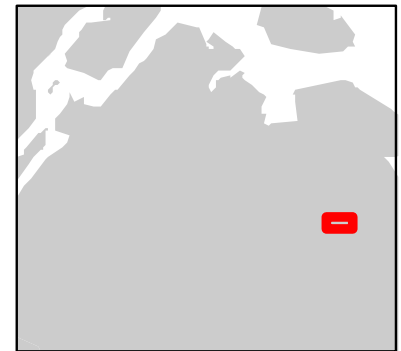
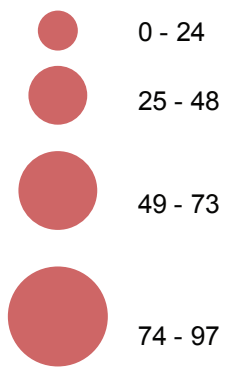
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	0	0	0.00%	0.00% over 60 mph
<b>56 to 60</b>	0	0	0.00%	0.00% over 55 mph
<b>51 to 55</b>	2	2	0.08%	0.08% over 50 mph
<b>46 to 50</b>	6	8	0.23%	0.31% over 45 mph
<b>41 to 45</b>	50	58	1.94%	2.25% over 40 mph
<b>36 to 40</b>	197	255	7.66%	9.91% over 35 mph
<b>31 to 35</b>	573	828	22.27%	<b>32.18% over 30 mph</b>
<b>26 to 30</b>	821	1649	31.91%	64.09% over 25 mph
<b>21 to 25</b>	606	2255	23.55%	87.64% over 20 mph
<b>16 to 20</b>	265	2520	10.30%	97.94% over 15 mph
<b>11 to 15</b>	43	2563	1.67%	99.61% over 10 mph
<b>10 and under</b>	10	2573	0.39%	100.00% over 0 mph
<b>Top Speed</b>	53 mph			



Bicycle/Pedestrian Fatalities



Bicycle/Pedestrian Injuries



**Northern Boulevard (between 87th Street and 102nd Street), Queens, NY**

Fatalities: 5 total (5 pedestrians, 0 bicyclists)

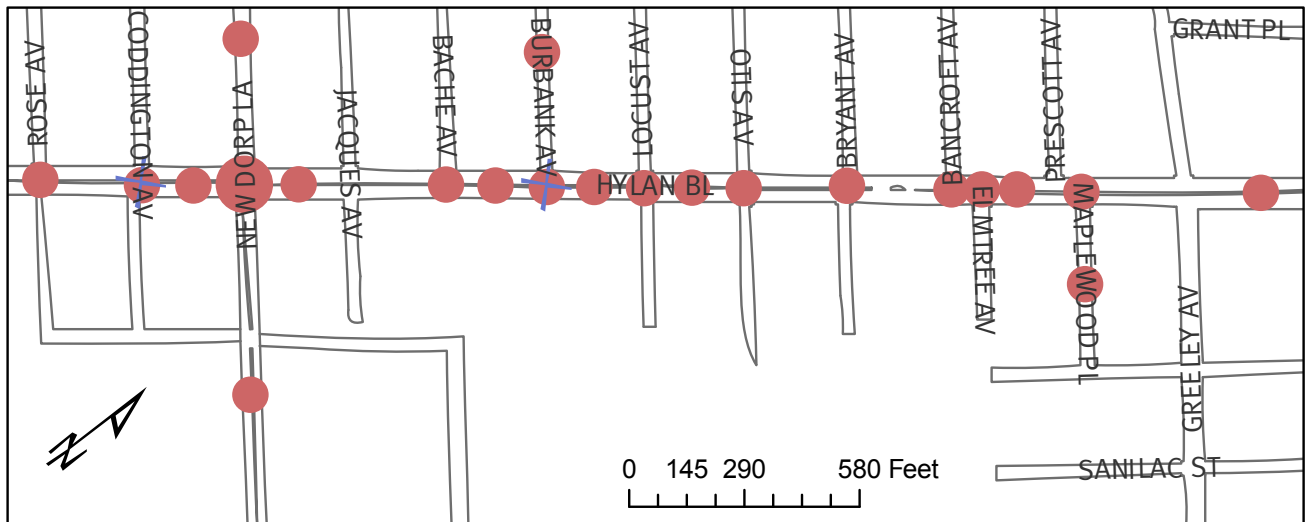
Injuries: 188 total (140 pedestrians, 48 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

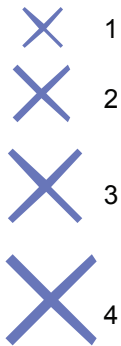
Source: NYS DOT

**Figure 14. Hylan Boulevard at New Dorp Lane, Staten Island, New York**

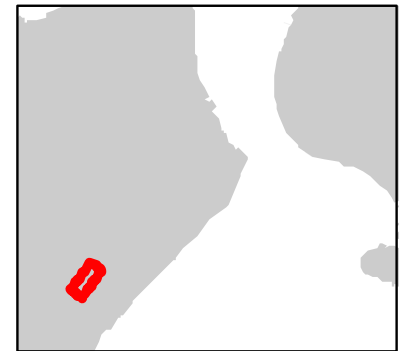
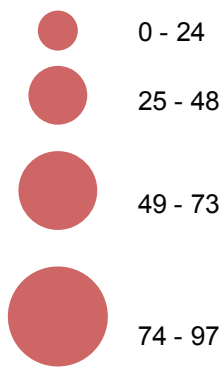
<b>Speed (mph)</b>	<b>Frequency of Speed</b>	<b>Cumulative Frequency</b>	<b>Absolute Percent</b>	<b>Cumulative Percent</b>
<b>Over 60</b>	1	1	0.03%	0.03% over 60 mph
<b>56 to 60</b>	0	1	0.00%	0.03% over 55 mph
<b>51 to 55</b>	2	3	0.06%	0.08% over 50 mph
<b>46 to 50</b>	14	17	0.39%	0.47% over 45 mph
<b>41 to 45</b>	108	125	2.98%	3.45% over 40 mph
<b>36 to 40</b>	420	545	11.60%	15.06% over 35 mph
<b>31 to 35</b>	844	1389	23.31%	<b>38.37% over 30 mph</b>
<b>26 to 30</b>	1033	2422	28.54%	66.91% over 25 mph
<b>21 to 25</b>	760	3182	20.99%	87.90% over 20 mph
<b>16 to 20</b>	356	3538	9.83%	97.73% over 15 mph
<b>11 to 15</b>	73	3611	2.02%	99.75% over 10 mph
<b>10 and under</b>	9	3620	0.25%	100.00% over 0 mph
<b>Top Speed</b>	61 mph			



Bicycle/Pedestrian Fatalities



Bicycle/Pedestrian Injuries



**Hylan Boulevard (between Lincoln Ave and Beach Ave), Staten Island, NY**

Fatalities: 3 total (3 pedestrians, 0 bicyclists)

Injuries: 103 total (79 pedestrians, 24 bicyclists)

Injuries and Fatalities by Motor Vehicles (1995 – 2005)

Source: NYS DOT