

**New York City Department of Transportation
Office of School Safety Engineering**



School Safety Engineering Project

FINAL REPORT: I.S. 125 (Thom J. McCann Woodside School), Queens



**Prepared by
The RBA Group and URBITRAN Associates Inc.**



August 16, 2006

**School Safety Engineering Project
Final Report: I.S. 125, Queens**

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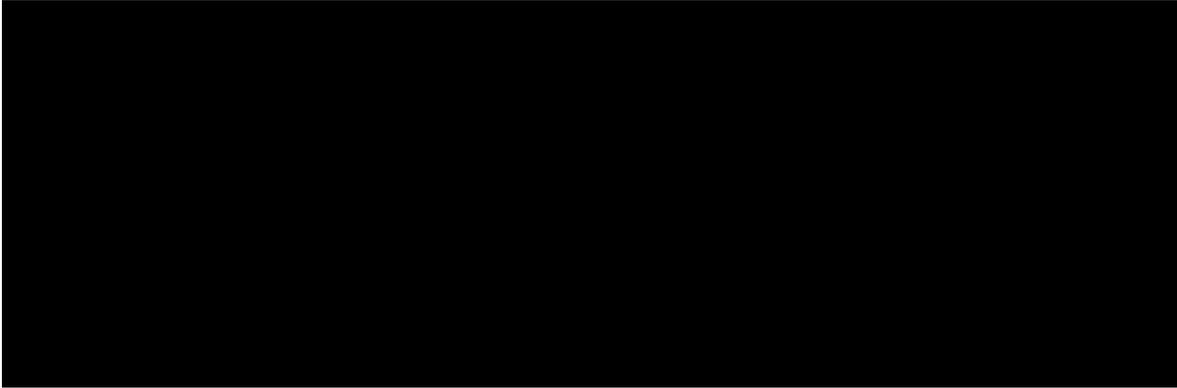
1. INTRODUCTION

1.1 PROJECT DESCRIPTION

The Department of Transportation (DOT) has developed school safety maps for 1,471 schools throughout the City. Schools currently in the program are primarily elementary and intermediate schools with an enrollment of at least 250 students. The safety plans include the designation of official school crosswalks, identified by prominent warning signs and roadway markings. DOT also designates curbside locations for school bus loading and unloading and other parking controls to improve conditions for students. In addition, nearly 350 speed reducers (humps) have been installed in the immediate vicinity of schools.

Under this consultant study, the School Safety Engineering Project, crash data in the vicinity of all program schools was reviewed. As a result, schools were ranked in terms of pedestrian safety, and 135 “priority” schools were identified Citywide. At each of these priority schools, safety improvements are being recommended (e.g., new school crosswalks, new traffic signals and signal timing modifications, new speed reducers). In addition, 32 of these schools will receive further investigation to design physical improvements (e.g., raised center medians, widened sidewalks, “neckdowns” or “bulbouts” at intersections). I.S. 125 (Thom J. McCann Woodside Intermediate School) in Woodside, Queens is one of the 135 “priority” schools identified by the New York City Department of Transportation, Office of School Safety Engineering.

2. BACKGROUND—EXISTING CONDITIONS AND ANALYSIS



2.2 NEIGHBORHOOD DESCRIPTION

Exhibit 1 shows an aerial view of the neighborhood surrounding the school. I.S. 125 is bounded by 47th Avenue to the north, 47th Street to the east, 48th Avenue to the south, and 46th Street to the west. The area surrounding the school is generally residential in character.

The school is situated one block south of Queens Boulevard and southeast of Greenpoint Avenue. Two blocks to the south of the school is the interchange of the Long Island Expressway and the Brooklyn Queens Expressway. The section of 47th Avenue adjacent to the school is a two-way street connecting Skillman Avenue in the west to New Calvary Cemetery in the east (See Figures 1 and 2).

The elevated 7 train (Flushing Line) runs over the center of Queens Boulevard one block north of the school, and has a station at 46th Street. Greenpoint Avenue is a two-way roadway running from Brooklyn on the south to Queens Boulevard, in Queens, on the north. Traffic calming techniques have been introduced in the vicinity of Greenpoint Avenue and Queens Boulevard where wide sidewalks with narrowed intersection crossings enhance pedestrian shopping activities. There have also been several traffic improvements along Queens Boulevard to improve traffic safety in the area. This includes a conversion of 48th Street to a one-way southbound street, away from Queens Boulevard, which serves to decrease traffic movements in the vicinity of the Queens Boulevard and 48th Street intersection. Work has also been completed to eliminate the free right turn from eastbound Queens Boulevard onto Greenpoint Avenue.



Figure 1: Looking south on 45th Street at narrowed street width along Greenpoint Avenue



Figure 2: Gateway treatment into pedestrian-friendly area on 46th Street at Queens Boulevard

2.3 MEETING WITH SCHOOL REPRESENTATIVES

Staff from the consultant team, New York City Department of Transportation, and the school principal met at the school on the morning of May 4, 2004. According to representatives of the school, the problems facing I.S. 125 student pedestrians are:

- Conflict of pedestrian flow leaving school with vehicular traffic at intersection of 47th Avenue and 47th Street, lack of traffic signal and crossing guards. According

to the principal, there have been three student pedestrian accidents with injuries since last year. 47th Street is a one-way roadway approaching 47th Avenue and the intersection is controlled by a stop sign. Drivers speed up while approaching 47th Avenue and have been observed traveling through the intersection without stopping despite the presence of student pedestrians and the stop sign.

- The school exit door on 47th Street is approximately 50 feet away from the intersection at 47th Avenue and all Grade 7 and 8 students leave from this exit. Students leaving school during dismissal time occupy most of the sidewalk and because of the crowded sidewalk some tend to use roadway space as sidewalk. (Note: Consultant staff returned to the school during dismissal time from 3:20 to 3:40 pm and observed students crossing 47th Avenue paying little attention to vehicular traffic and assuming roadway space is for student pedestrians. During this time drivers also appeared reluctant to yield to student pedestrians. See Figures 3 and 4.)
- School administrators have requested the installation of a traffic signal at this intersection and also a mid-block speed reducer on 47th Street.
- Grade 6 students exit from the door next to the intersection of 47th Avenue and 46th Street. Since the students are more evenly distributed and the intersection has a traffic signal, no problems were observed. Grade 5 students use the mid-block gate on 46th Street.

(See the Appendix for a summary of school's survey response.)



Figure 3: Looking west at the corner of 47th Avenue and 47th Street during afternoon dismissal time at I. S. 125, students and vehicles compete for right of way

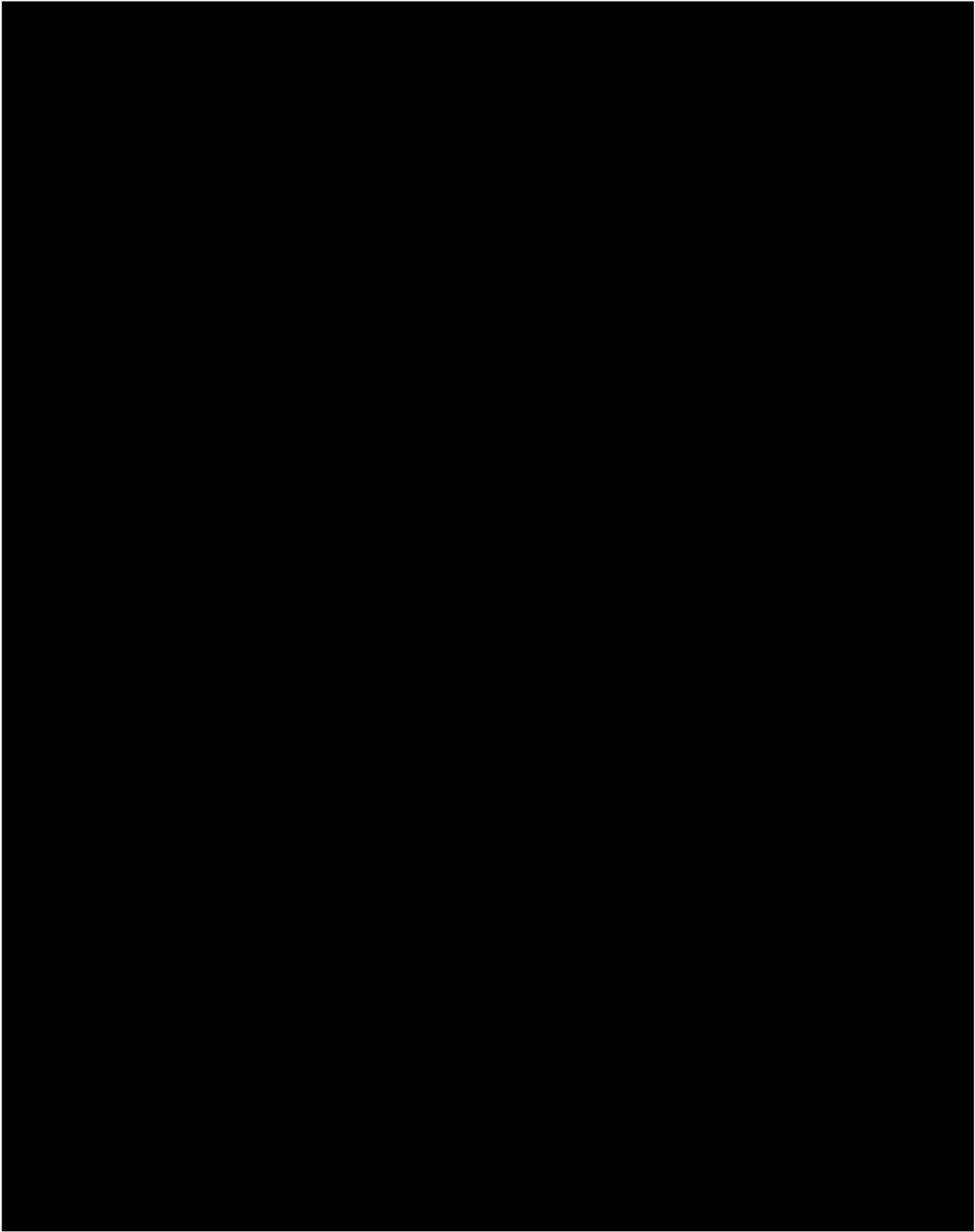




Figure 5: Mid-block gate on 46th Street for Grade 5 students using trailer classrooms

2.6 PRIMARY MODES OF TRANSPORT TO AND FROM SCHOOL

The school’s “catchment area” as defined by the Department of Education is shown in Exhibit 2. The catchment area, verified by the school assistant principal, is roughly bounded by Queens Boulevard to the north, 58th Street and Maurice Avenue to the east, Grand Avenue and the Brooklyn borough line to the south, and 30th Street to the west.

Table 1 presents the modes of travel for I.S. 125 as identified by school representatives.

TABLE 1: MODES OF TRAVE (AS ESTIMATED BY SCHOOL OFFICIALS)	STUDENTS (Percentage)
Walk	51%
Driven by car	2%
School bus	5%
MTA Bus/Subway	42%
Bicycle	0%
TOTAL	100%

2.7 ADDITIONAL STUDENT PEDESTRIAN TRAFFIC GENERATORS

There are some retail stores, delis, groceries, and restaurants in the vicinity of the school. Both Queens Boulevard and Greenpoint Avenue to the north and west of the school, respectively, are commercial corridors with many stores and commercial activities.



Figure 6: Looking northeast from in front of school at Pizza Restaurant on northeast corner of 47th Avenue and 47th Street

2.8 CROSSING GUARD LOCATIONS

According to the school's assistant principal, there are no crossing guards assigned to I.S. 125. School officials have requested a crossing guard. At the present time, the assistant principal, a dean, and school security personnel observe and supervise student pedestrians at the four corners of the school block.

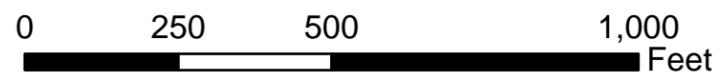
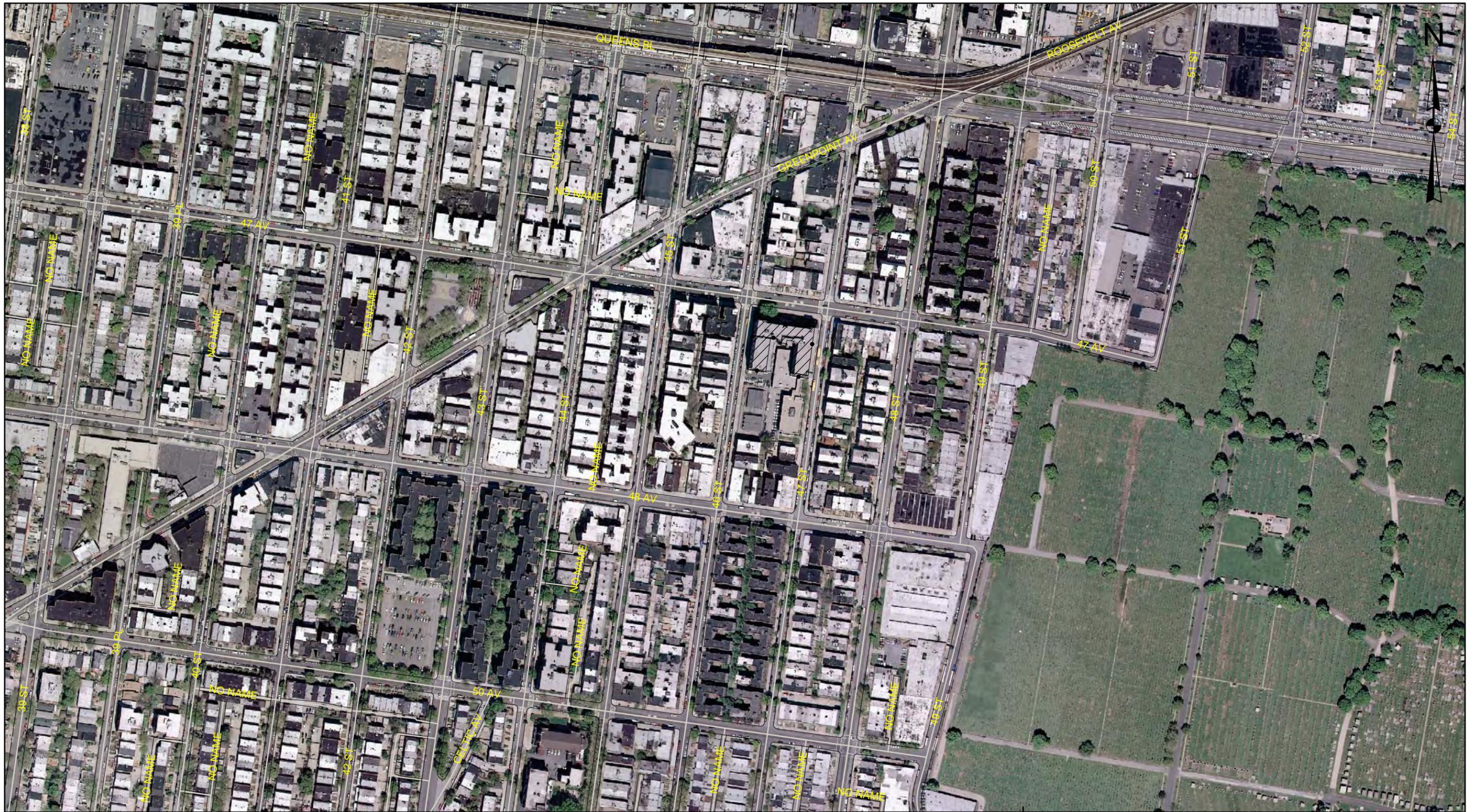


EXHIBIT 1
I.S. 125 QUEENS
WOODSIDE INTERMEDIATE SCHOOL
AERIAL PHOTOGRAPH



LEGEND:

CATCHMENT AREA, (DEPARTMENT OF EDUCATION DESIGNATED AREA FROM WITHIN WHICH STUDENTS ARE ENTITLED TO ATTEND I.S. 125)

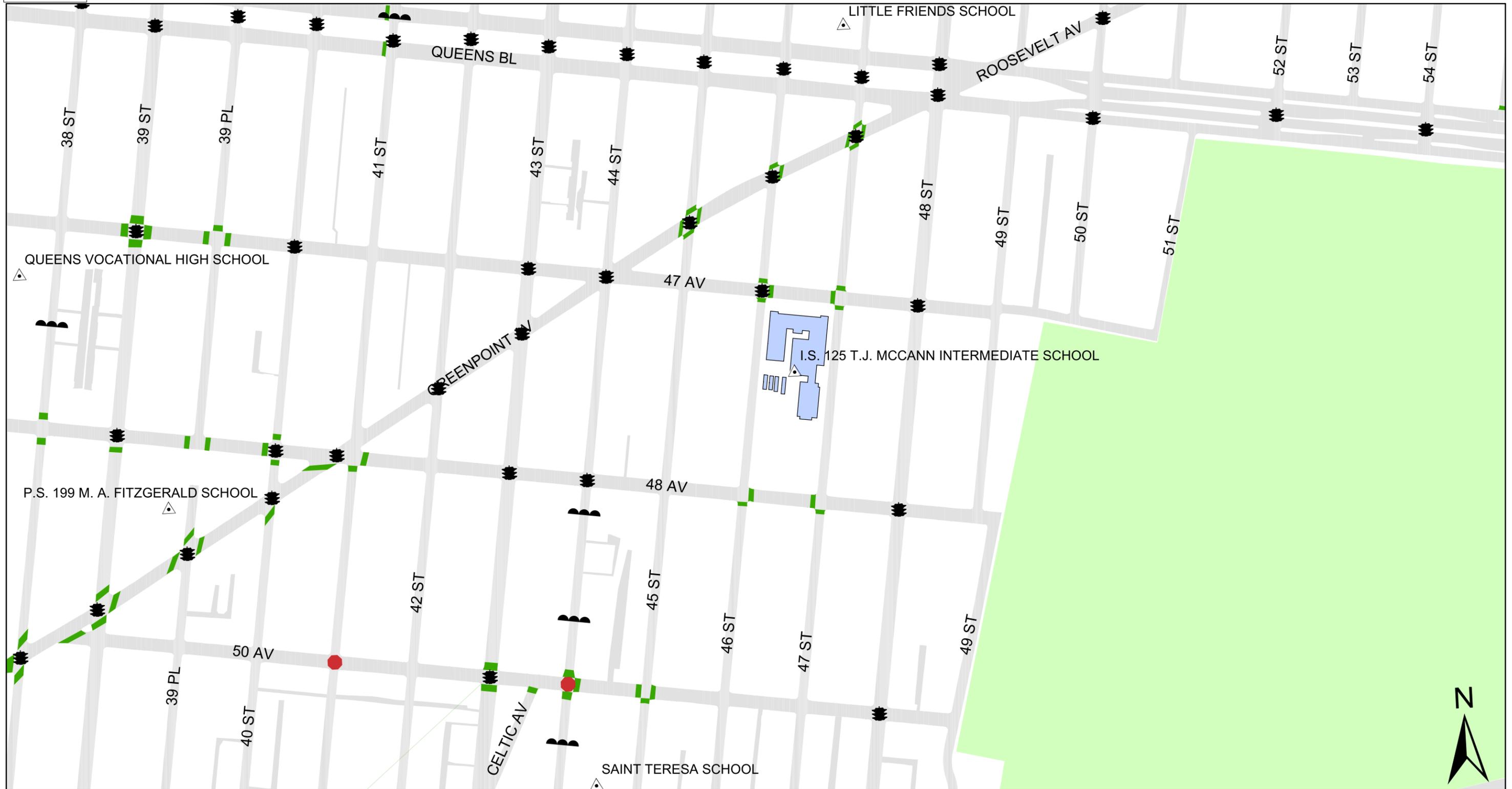


02500 1,000 Feet

EXHIBIT 2
I.S. 125 QUEENS
WOODSIDE IS
CATCHMENT AREA



School Traffic Safety Map



The School Traffic Safety Map was established to help provide the maximum degree of safety for children going to and from school - by indicating the location of speed reducers, school crosswalks and some traffic control devices. (While virtually all intersections in NYC benefit from traffic control devices - such as stop signs, traffic signals, yield signs, and all way stop signs - this map shows only traffic signals and all way stop signs.) The school crosswalks that are shown are ladder striped and make the crosswalk more visible to drivers and help make the intersection safer. These crosswalks are where school children are recommended to cross.

Note: Every attempt has been made to provide complete and accurate information that is updated regularly. The City's streets are constantly changing and it is not always possible to present information without error.

LEGEND:

SCHOOL LOCATION 	TRAFFIC SIGNAL 
SCHOOL CROSSWALK 	ALL - WAY STOP 
	SPEED REDUCER 

IS 125 Queens
WOODSIDE INTERMEDIATE SCHOOL

Prepared by the NEW YORK CITY DEPARTMENT OF TRANSPORTATION, Iris Weinsall, COMMISSIONER.

Map created on 11/17/2006

Exhibit 3

COMM. BOARD: 402
 PRECINCT: 108

1.5.1 12

3. TRAFFIC OPERATIONS

3.1 SCHOOL BUS OPERATIONS

According to school representatives, there are approximately 90 students who ride a school bus to and from school, and the majority of them are special education students. Five school buses provide transportation for qualified students. School buses stop in front of the main entrance on 47th Avenue, for student drop-off and pick-up. School bus operations, according to school representatives, are not an issue at I.S. 125 (see Figure 7).

Consultant observations concur that there is sufficient space on the 47th Avenue block face fronting I.S. 125 for school bus operations.



Figure 7: Looking west on 47th Avenue at students leaving yellow school bus in front of school

3.2 PARENT DROP-OFF OPERATIONS

According to school representatives, only two percent of I.S. 125 students are dropped off by parents or guardians (from field observations on the morning and afternoon of May 3, 2004, it appears that less than one percent of students are driven to and from school). During morning arrival and afternoon dismissal, double parking and U-turns in front of the school did not appear to be an issue of concern (see Figure 8).



Figure 8: Student being dropped off in front of the main entrance of I.S. 125

3.3 PARKING REGULATIONS

Parking regulations around the school block are shown in Exhibit 4.

3.4 EXISTING SCHOOL SIGNS AND MARKINGS

Exhibit 3 shows the existing school signals and pavement markings around I.S. 125 (see Figure 9). It should be noted that a citywide signage program is currently underway to upgrade school signage to current Federal Manual on Uniform Traffic Control Devices (MUTCD) standards of fluorescent yellow-green signs accompanied by downward pointing arrows. (Signs scheduled to be installed under this program are shown as “existing” in Exhibit 7.)



Figure 9: Typical School and parking regulations in front of school

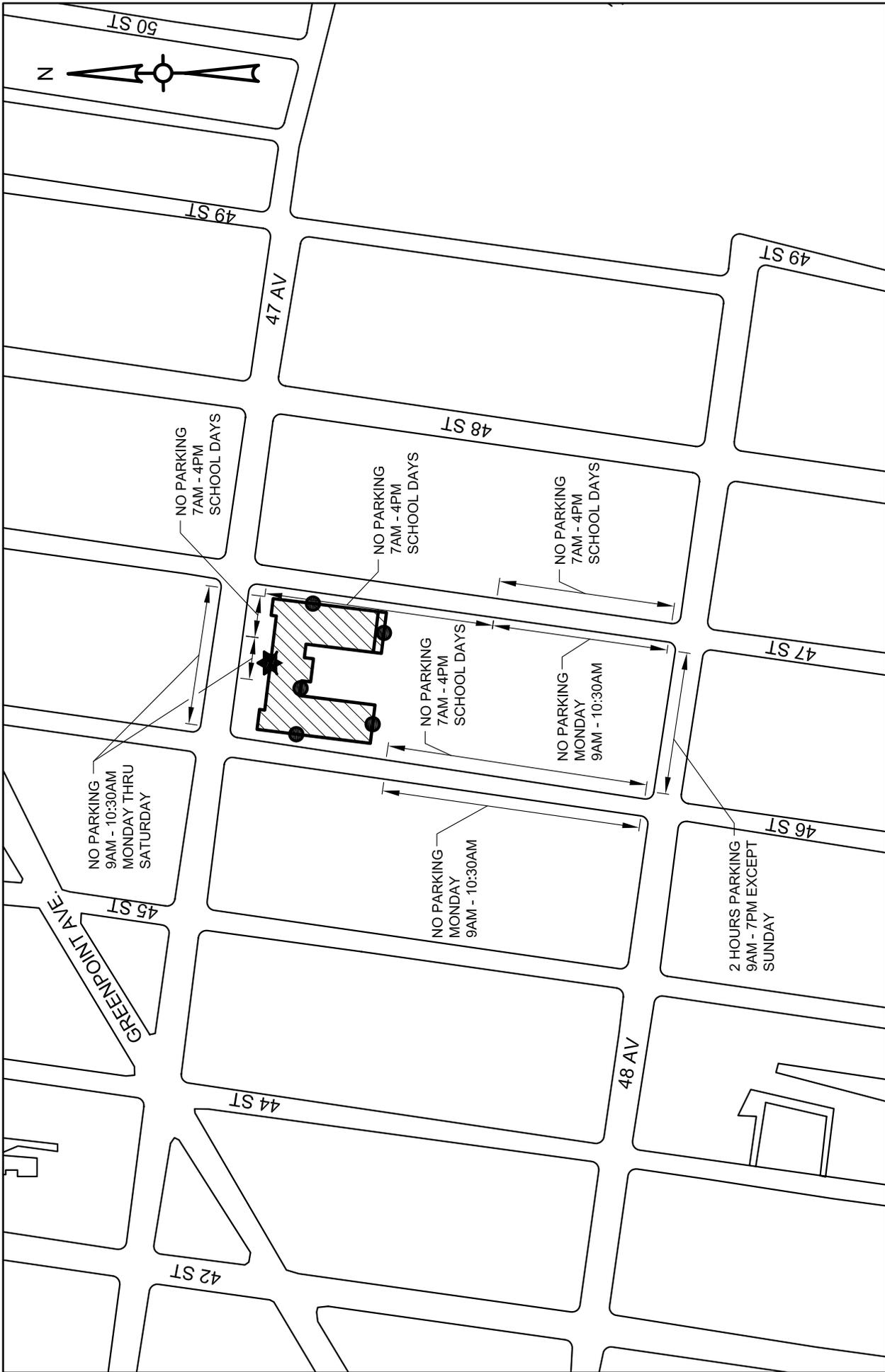
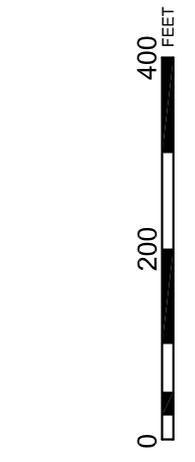


EXHIBIT 4
 I.S. 125 QUEENS
 WOODSIDE INTERMEDIATE SCHOOL
 EXISTING PARKING REGULATIONS



- LEGEND:**
- ★ MAIN ENTRANCE
 - ENTRANCE

3.5 ACCIDENT SUMMARY

Exhibit 5 and Table 2 show a summary of accidents, as obtained from the New York State Department of Motor Vehicles (DMV), in the vicinity of I.S. 125 for the three-year period from January 1, 1998 through December 31, 2000. The DMV data provides some detail relating to the circumstances and cause of an accident. Table 3 is a summary of more recent accident data obtained from the NYC Police Department (NYPD). Though current through 2004, the NYPD data does not provide the same level of detail as the DMV data.

This report targets intersections closest to the school where the highest concentration of student pedestrians occurs. Intersections farther from the school and locations for which detailed data was not available at the time of this study will be addressed with the ongoing work of DOT's School Safety Engineering Program. DMV accident data is discussed in Section 3.6, Traffic Operations and Issues.

INTERSECTION	TOTAL ACCIDENTS	PEDESTRIAN ACCIDENTS	PEDESTRIAN FATALITIES	SCHOOL-RELATED ACCIDENTS*
47 th Avenue and 46 th Street	9	1	0	0
47 th Avenue and 47 th Street	8	1	0	1
48 th Avenue and 46 th Street	19	2	0	1
48 th Avenue and 47 th Street	7	1	0	0
Greenpoint Avenue and 44 th St/47 th Avenue	19	7	1	0
Greenpoint Avenue and 45 th Street	7	2	0	0
Greenpoint Avenue and 46 th Street	7	0	0	0
Greenpoint Avenue and 47 th Street	20	1	0	0
TOTAL	96	15	1	2

INTERSECTION	TOTAL ACCIDENTS	PEDESTRIAN ACCIDENTS	PEDESTRIAN FATALITIES	SCHOOL-RELATED ACCIDENTS*
47 th Avenue and 46 th Street	13	3	0	1
47 th Avenue and 47 th Street	19	3	0	1
48 th Avenue and 46 th Street	23	7	0	1
48 th Avenue and 47 th Street	25	1	0	0
Greenpoint Avenue and 44 th St/47 th Avenue	14	2	0	0
Greenpoint Avenue and 45 th Street	11	4	0	1
Greenpoint Avenue and 46 th Street	20	3	0	0
Greenpoint Avenue and 47 th Street	17	3	0	0
TOTAL	142	26	0	4

* School-related accidents are defined as accidents involving school-age pedestrians (age 4 to 14), occurring on weekdays during the school year.

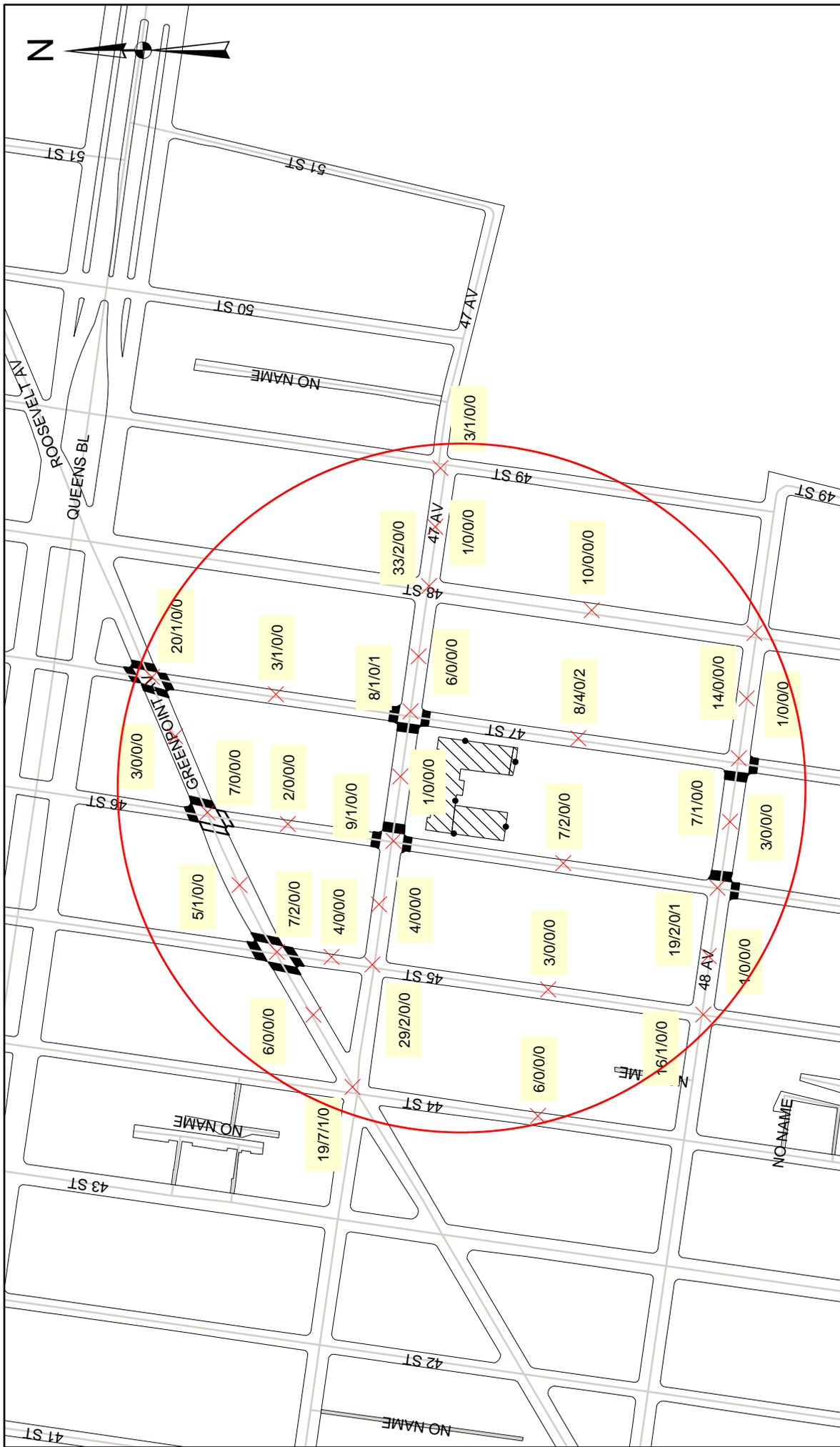


EXHIBIT 5
I.S. 125 QUEENS
WOODSIDE IS
ACCIDENT SUMMARY (1998-2000)

LEGEND:
 ACCIDENT LOCATION
 SCHOOL CROSSWALK
 SCHOOL CROSSWALK ASSIGNED TO ANOTHER SCHOOL
 BORDER OF 700 FEET
 X/X/X
 TOTAL PED ACCD / PED ACCD / FATAL / SCHOOL PED ACCD

0 250 500 1,000 Feet

3.6 TRAFFIC OPERATIONS AND ISSUES

The specific roadway-related physical conditions for each location within the school's vicinity directly affect the safety and efficiency of operations for both pedestrian and vehicular traffic. These conditions are required information when analyzing a location, and are the starting point for any revisions that may be considered to improve safety and/or efficiency.

The following sub-sections outline the physical conditions and issues concerning traffic operations and accidents at the intersections in the vicinity of I.S. 125. Details on specific intersections or roadway segments are given in the following sections.

To more fully assess the situation for the area in the neighborhood of I.S. 125, the consultant performed a search of the NYC DOT records for any signal warrant studies that may have been performed at any of the intersections. A signal warrant study was completed for the intersection of 47th Avenue and 47th Street in February 2003 to determine the need for a traffic signal. The findings were that the existing traffic controls were the most appropriate for the location, and no warrants were found to be satisfied as of May 16, 2003.

3.6.1 47th Avenue and 46th Street

This is a four-leg signalized intersection with school crosswalks located across the north and south legs of 46th Street, and the east leg of 47th Avenue, with a pedestrian crosswalk located across the west leg of 47th Avenue.

47th Avenue is a two-way street with one travel lane and a parking lane on each side of the roadway. 46th Street is a one-way southbound street with one travel lane and parking on both sides of the roadway (see Figures 10, 11, and 12).

This intersection was the site of nine accidents between 1998 and 2000; one of these was a pedestrian accident, which was not a school-related accident or a fatality.



Figure 10: Looking west along 47th Avenue, from in front of school, at 46th Street intersection



Figure 11: Looking south on 46th Street across intersection with 47th Avenue (school is on left)



Figure 12: Looking east at pedestrians crossing 47th Ave at 46th St intersection at dismissal time (School is shown at upper right)

3.6.2 47th Avenue and 47th Street

This is a four-leg unsignalized intersection with school crosswalks located across the north and south legs of 47th Street, the west leg of 47th Avenue.

47th Avenue is a two-way street with one travel lane and a parking lane on each side of the roadway. 47th Street is a one-way northbound street with one travel lane and parking on both sides of the roadway. 47th Avenue is the through street (no stop signs). A stop sign controls northbound 47th Street traffic (see Figures 13 and 14).

This intersection was the site of eight accidents between 1998 and 2000; one of these was a pedestrian accident, which was not a fatality, but was school-related. In the school-related accident, a twelve-year old pedestrian sustained a “non-incapacitating injury” on Friday, January 9, 1998 at 3:00 pm while playing in the roadway. The road was dry and the weather was cloudy.

In addition, two school-related pedestrian accidents occurred mid-block on 47th Street between 47th Avenue and 48th Avenue. The first of these accidents occurred on Wednesday, October 27, 1999 at 2:00 pm when an 11-year-old pedestrian sustained a “possible injury” when emerging from behind a parked vehicle. The roadway surface was dry, and the accident occurred during daylight under cloudy weather conditions. The second accident occurred on Wednesday, December 13, 2000 at 2:00 pm when a 12-year-old pedestrian sustained a “possible injury” when crossing mid-block with no traffic signal control or crosswalk. The roadway surface was dry, and the accident occurred during daylight under clear weather conditions.

The school’s principal reported a speeding problem on 47th Avenue. Therefore, a speed survey was conducted on 47th Avenue between 47th Street and 48th Street in order to verify the existence of a speeding problem and to determine its extent.

The eastbound vehicles on 47th Avenue between 47th Street and 48th Street were found to be traveling with an 85th percentile speed of 27 mph. The westbound vehicles on 47th Avenue between 47th Street and 48th Street were found to be traveling with an 85th percentile speed of 28 mph.

The 85th percentile speed is considered to be the representative speed for the street segment. Speeds above the 30 mph threshold would indicate a speeding problem and may require appropriate traffic calming measures.

The detailed results of the spot speed survey on 47th Avenue between 47th Street and 48th Street are shown in the Appendix at the end of the document.

In order to determine the appropriate traffic control for the school crosswalks, a preliminary traffic signal warrant assessment was performed to assess the traffic situation and determine what type of traffic control devices would be appropriate. A traffic count was conducted at the intersection of 47th Avenue and 47th Street from 7:30 to 9:00 am on Thursday, June 16, 2005. The results of the peak hour (7:45 to 8:45 am) count are shown in Tables 4 and 5 and in Exhibit 6A at the end of this section.

In addition, a traffic signal warrant analysis was performed to determine the need for a traffic signal installation at this intersection. The results of the preliminary assessment based on traffic signal warrant 4 (Pedestrian Volumes) and warrant 5 (School Crossing) of the Federal MUTCD are presented in Tables 6 and 7, respectively and show that a traffic signal is warranted at the intersection.

TABLE 4: VEHICLE VOLUMES (7:45-8:45 AM)

INTERSECTION	47th Street NORTHBOUND			47th Avenue EASTBOUND		47th Avenue WESTBOUND	
	Left	Straight	Right	Left	Straight	Right	Straight
47 th Avenue and 47 th Street	27	53	24	28	87	108	147
TOTAL	104			115		255	

TABLE 5: PEDESTRIAN VOLUMES (7:45-8:45 AM)

INTERSECTION	Crossing 47th Street SOUTH-LEG CROSSWALK	Crossing 47th Street NORTH-LEG CROSSWALK	Crossing 47th Avenue WEST-LEG CROSSWALK	Crossing 47th Avenue EAST-LEG CROSSWALK
47 th Avenue and 47 th Street	376 (102 / 274) *	138 (69 / 69) *	267 (115 / 152) *	237 (140 / 97) *

* Numbers in parenthesis indicate (adults / students).

TABLE 6: TRAFFIC SIGNAL WARRANT 4 ANALYSIS (PEDESTRIAN VOLUME)						
Intersection	Total Hourly (7:45-8:45 AM) Pedestrian Volumes			Criteria		Traffic Signal Warranted
	Crossing Street			Gap	Crossing Major Street	
	Major	Minor	Total	Fewer than 60 gaps / hour*	Greater than 190 Pedestrians / hour	
47 ^h Avenue and 47 ^h Street	504	514	1018	Yes	Yes	Yes

* The available gap is based on the time needed for a pedestrian to walk across the street. The analysis assumed 17 seconds.

TABLE 7: TRAFFIC SIGNAL WARRANT 5 ANALYSIS (SCHOOL CROSSING)						
Intersection	Total Hourly (7:45-8:45 AM) Student Volumes			Criteria		Traffic Signal Warranted
	Crossing Street			Gap	Crossing Major Street	
	Major	Minor	Total	Fewer than 60 gaps / hour ⁽¹⁾	Greater than 20 Students / hour	
47 ^h Avenue and 47 ^h Street	249	343	592	Yes	Yes	Yes

* The available gap is based on the time needed for a pedestrian to walk across the street. The analysis assumed 17 seconds.



Figure 13: Looking south across 47^h Avenue at 47^h Street at dismissal time



Figure 14: Looking west on 47th Avenue across 47th Street at dismissal time

3.6.3 48th Avenue and 46th Street

This is a four-leg unsignalized intersection with school crosswalks located across the east leg of 48th Avenue and the south leg of 46th Street.

48th Avenue is a two-way street with one travel lane and a parking lane on each side of the roadway. 46th Street is a one-way southbound street with one travel lane and parking on both sides of the roadway. 48th Avenue is the through street (no stop signs). A stop sign controls southbound 46th Street traffic (see Figures 15 and 16).

This intersection has been the site of 19 accidents between 1998 and 2000. Two of these were pedestrian accidents, one of which was a school-related accident. In the school-related accident, a seven-year old pedestrian sustained an “incapacitating injury” on Monday, February 1, 1999 at 6:00 pm while crossing the roadway at the intersection, but not at a marked crosswalk. The road was dry and the weather was clear. The lighting condition was dark, with the roadway lighted. There were no fatal pedestrian accidents during the same three-year period.

The school’s principal reported a speeding problem on 48th Avenue. Therefore, a speed survey was conducted on 48th Avenue between 46th Street and 47th Street in order to verify the existence of a speeding problem and to determine its extent.

The eastbound vehicles on 48th Avenue between 46th Street and 47th Street were found to be traveling with an 85th percentile speed of 29 mph. The westbound vehicles on 48th Avenue between 46th Street and 47th Street were found to be traveling with an 85th percentile speed of 28 mph.

The 85th percentile speed is considered to be the representative speed for the street segment. Speeds above the 30 mph threshold would indicate a speeding problem and may require appropriate traffic calming measures.

The detailed results of the spot speed survey on 48th Avenue between 46th Street and 47th Street are shown in the Appendix at the end of the document.

In order to determine the appropriate traffic control for the school crosswalks, a preliminary traffic signal warrant assessment was performed to assess the traffic situation and determine what type of traffic control devices would be appropriate. A traffic count was conducted at the intersection of 48th Avenue and 46th Street from 7:30 to 9:00 am on Friday, June 17, 2005. The results of the peak hour (7:45 to 8:45 am) count are shown in Tables 8 and 9 and in Exhibit 6B.

In addition, a traffic signal warrant analysis was performed to determine the need for a traffic signal installation at this intersection. The results of the preliminary assessment based on traffic signal warrant 4 (Pedestrian Volumes) and warrant 5 (School Crossing) of the Federal MUTCD are presented in Tables 10 and 11, respectively and show that a traffic signal is not warranted at the intersection.

INTERSECTION	46th Street SOUTHBOUND			48th Avenue EASTBOUND		48th Avenue WESTBOUND	
	Left	Straight	Right	Straight	Right	Left	Straight
48 th Avenue and 46 th Street	31	60	41	28	100	28	182
TOTAL	132			128		210	

INTERSECTION	Crossing 46th Street NORTH-LEG CROSSWALK	Crossing 46th Street SOUTH-LEG CROSSWALK	Crossing 48th Avenue WEST-LEG CROSSWALK	Crossing 48th Avenue EAST-LEG CROSSWALK
48 th Avenue and 46 th Street	118 (63 / 55) *	38 (25 / 13) *	175 (144 / 31) *	131 (104 / 27) *

* Numbers in parenthesis indicate (adults / students).

Intersection	Total Hourly (7:45-8:45 AM) Pedestrian Volumes			Criteria		Traffic Signal Warranted
	Crossing Street			Gap	Crossing Major Street	
	Major	Minor	Total	Fewer than 60 gaps / hour*	Greater than 190 Pedestrians / hour	
48 th Avenue and 46 th Street	306	156	462	No	Yes	No

* The available gap is based on the time needed for a pedestrian to walk across the street. The analysis assumed 18 seconds.

TABLE 11: TRAFFIC SIGNAL WARRANT 5 ANALYSIS (SCHOOL CROSSING)						
Intersection	Total Hourly (7:45-8:45 AM) Student Volumes			Criteria		Multi-way Stop Warranted
	Crossing Street			Gap	Crossing Major Street	
	Major	Minor	Total	Fewer than 60 gaps / hour ⁽¹⁾	Greater than 20 Students / hour	
48 th Avenue and 46 th Street	58	68	126	No	Yes	No

* The available gap is based on the time needed for a pedestrian to walk across the street. The analysis assumed 18 seconds.



Figure 15: Looking southeast across 48th Avenue at 46th Street intersection



Figure 16: Looking east along north side of 48th Avenue across 46th Street intersection

3.6.4 48th Avenue and 47th Street

This is a four-leg unsignalized intersection with school crosswalks located across the west leg of 48th Avenue and the south leg of 47th Street.

48th Avenue is a two-way street with one travel lane and a parking lane on each side of the roadway. 47th Street is a one-way northbound street with one travel lane and parking on both sides of the roadway. 48th Avenue is the through street (no stop signs). A stop sign controls northbound 47th Street traffic (see Figure 17).

This intersection has been the site of seven accidents between 1998 and 2000; one of these was a pedestrian accident, which was not a school-related accident. There were no pedestrian fatalities reported during this time period.

The school principal reported a speeding problem on 47th Street. Therefore, a speed survey was conducted on 47th Street between 48th Avenue and 47th Avenue in order to verify the existence of a speeding problem and to determine its extent.

The 85th percentile speed for northbound vehicles on 47th Street between 48th Avenue and 47th Avenue was found to be 27 mph.

The 85th percentile speed is considered to be the representative speed for the street segment. Speeds above the 30 mph threshold would indicate a speeding problem and may require appropriate traffic calming measures.

The detailed results of the spot speed survey on 47th Street between 48th Avenue and 47th Avenue are shown in the Appendix at the end of the document.



Figure 17: Looking north on 47th Street across 48th Avenue

3.6.5 Greenpoint Avenue and 44th Street/47th Avenue

This is a six-leg signalized intersection with school crosswalks (associated with another school) located across all legs of the intersection and curb extensions (neckdowns) on all four corners.

Greenpoint Avenue is a two-way street with one travel lane and a parking lane on each side of the roadway. 44th Street is a one-way southbound street with one travel lane and parking on both sides of the roadway. 47th Avenue is a two-way street with one travel lane and a parking lane on each side of the roadway.

This intersection has been the site of 19 accidents between 1998 and 2000. Seven of these were pedestrian accidents, but none were school-related accident. There was one fatal pedestrian accident involving a 69-year old pedestrian on Monday, April 26, 1999 at 11:00 am while crossing the intersection at an unspecified location. The roadway surface was dry. The accident occurred during daylight under clear weather conditions.

3.6.6 Greenpoint Avenue and 45th Street

This is a four-leg signalized intersection with school crosswalks located across all four legs of the intersection, and curb extensions (neckdowns) on all four corners.

Greenpoint Avenue is a two-way street with one travel lane and a parking lane on each side of the roadway. 45th Street is a one-way northbound street with one travel lane and parking on both sides of the roadway (see Figures 18 and 19).

This intersection has been the site of seven accidents between 1998 and 2000; two of these were pedestrian accidents, neither of which was a school-related accident. There were no pedestrian fatalities reported during this time period.



Figure 18: Looking south on 45th Avenue across intersection of Greenpoint Avenue and 45th Avenue (note curb neckdowns)



Figure 19: Looking east on Greenpoint Ave at 45th St intersection (note curb neckdowns)

3.6.7 Greenpoint Avenue and 46th Street

This is a signalized intersection with school crosswalks located across the east leg of Greenpoint Avenue and the north leg of 46th Street. There are pedestrian crosswalks across the west leg of Greenpoint Avenue and the south leg of 46th Street. Curb extensions (neckdowns) are located on all four corners of the intersection.

Greenpoint Avenue is a two-way street with one traffic lane and a parking lane on each side of the roadway. 46th Street is a one-way southbound street with one traffic lane and parking on both sides of the roadway (see Figures 20 and 21).

This intersection has been the site of seven accidents between 1998 and 2000, none of which were pedestrian accidents.



Figure 20: Looking north on 46th Street across Greenpoint Avenue intersection



Figure 21: Looking east on Greenpoint Avenue across 46th Street intersection

3.6.8 Greenpoint Avenue and 47th Street

This is a signalized intersection with school crosswalks located across all four legs of the intersection, and curb extensions (neckdowns) on all four corners.

Greenpoint Avenue is a two-way street with one traffic lane and a parking lane on each side of the roadway. 47th Street is a one-way northbound street with one traffic lane and parking on both sides of the roadway.

This intersection has been the site of 20 accidents between 1998 and 2000, one of which was a pedestrian accident but was not school-related.

3.7 SIGNAL TIMING

Pedestrian crossing time was field verified at all signalized intersections in the vicinity of I.S. 125, and found to be adequate (for a child pedestrian walking rate of 3 ft/sec) in all directions and approaches (see Table 12).

TABLE 12: PEDESTRIAN CROSSING TIMES AT SIGNALIZED INTERSECTIONS				
INTERSECTION	CROSSWALK WIDTH (FEET)	PEDESTRIAN TIME ACTUAL (SECONDS)	PEDESTRIAN TIME REQUIRED (SECONDS)	TIMING ADJUSTMENT REQUIRED?
47th Avenue and 46th Street.				
crossing 47 th Avenue	43	25	18	No
crossing 46 th Street	29	25	13	No
Greenpoint Avenue and 45th Street				
crossing Greenpoint Avenue	44	30	18	No
crossing 45 th Street	27	57	12	No
Greenpoint Avenue and 46th Street				
crossing Greenpoint Avenue	37	30	16	No
crossing 46 th Street	25	57	12	No
Greenpoint Avenue and 47th Street				
crossing Greenpoint Avenue	44	30	18	No
crossing 47 th Street	35	57	15	No

Note: A rate of 3 ft/sec plus 3 seconds reaction time was utilized as the child pedestrian walking rate.

3.8 PHYSICAL CONDITIONS

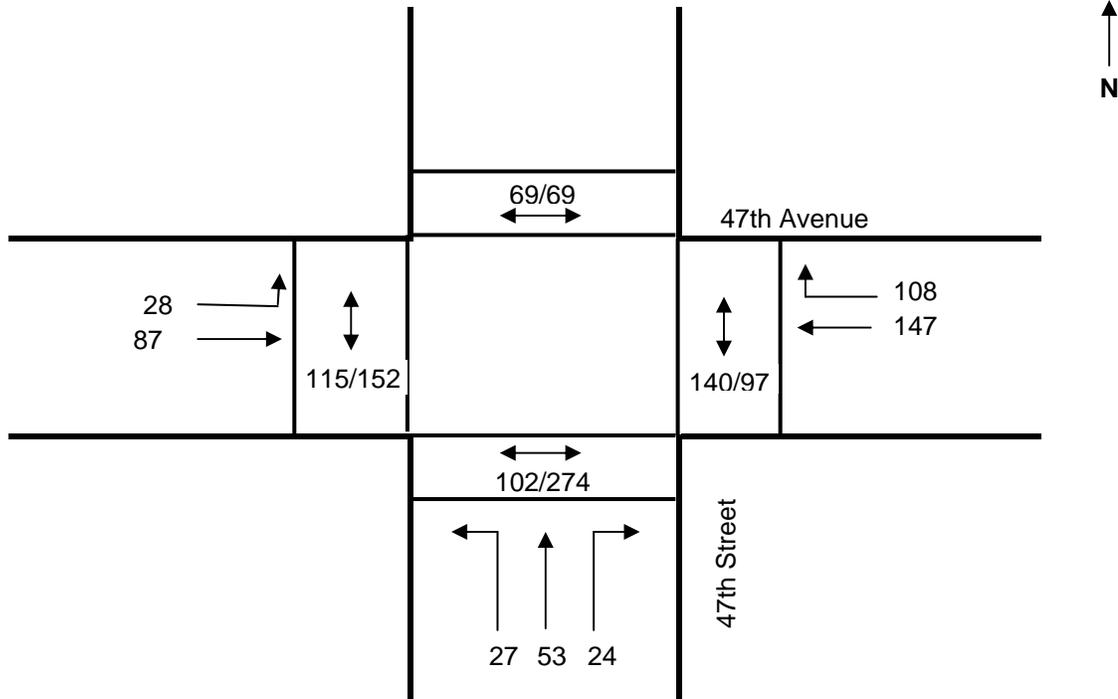
3.8.1 Roadways and Sidewalks

The roadways in the vicinity of I.S. 125 are generally in fair condition. Sidewalks are 10 to 15 feet wide on the school block face, and are in fair condition.

3.8.2 Pedestrian Ramps

Overall, pedestrian ramps in the vicinity of the school appear to be standard except for three locations. The first is northwest corner of Greenpoint Avenue and 47th Street where the pedestrian ramp for the crosswalk located across the east leg of Greenpoint Avenue is missing. The other two locations are on the northeast and southeast corners of the 48th Avenue and 46th Street intersection. The pedestrian ramps for the crosswalk located

One Hour Traffic Volumes
Thursday, June 16th, 2005 7:30am - 9am

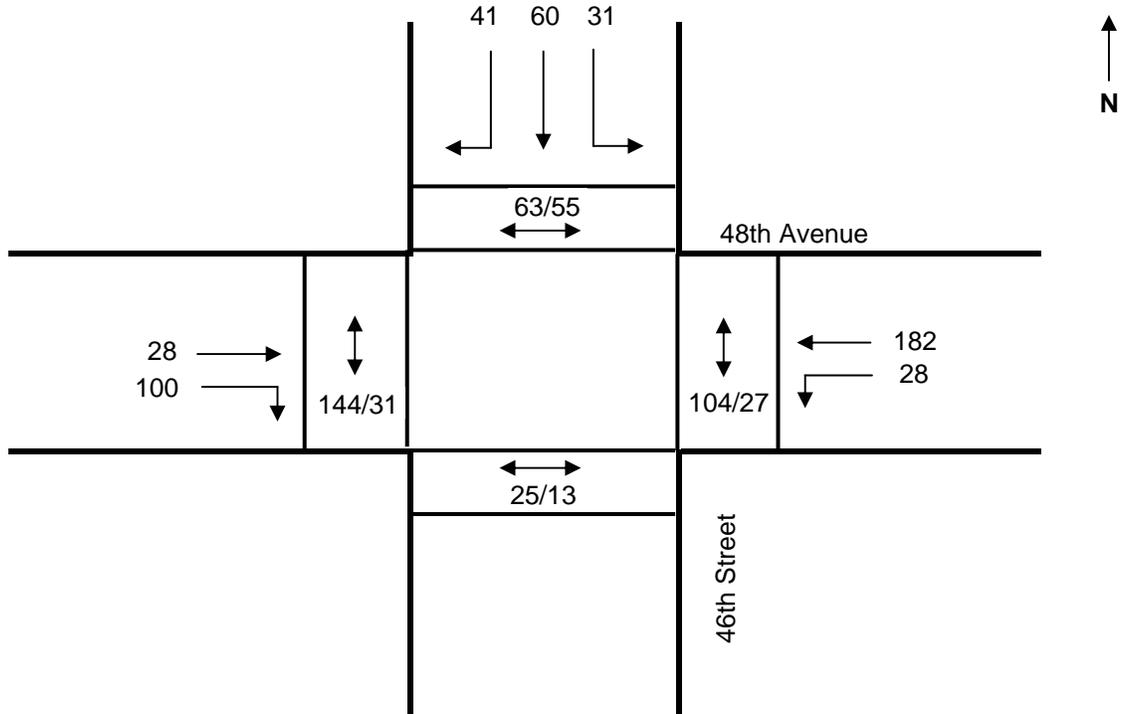


Intersection of 47th Avenue and 47th Street

Table of Content:	
XX / XX	Adult / Child
←→	Pedestrian Counts
—↑	Vehicle Movement

EXHIBIT 6A
I.S. 125 QUEENS WOODSIDE IS
TRAFFIC AND PEDESTRIAN COUNTS

One Hour Traffic Volumes
Friday, June 17th, 2005 7:30am - 9am



Intersection of 48th Avenue and 46th Street

Table of Content:

XX / XX	Adult / Child
←→	Pedestrian Counts
→	Vehicle Movement

EXHIBIT 6B
I.S. 125 QUEENS WOODSIDE IS
TRAFFIC AND PEDESTRIAN COUNTS

4. POTENTIAL MEASURES TO IMPROVE STUDENT PEDESTRIAN SAFETY

This section describes the proposed measures to improve school pedestrian safety around I.S. 125. The proposed recommendations are divided into short-term and long-term measures. Short-term measures are those that potentially can be performed in-house. Long-term measures involve capital improvements. Each of the short- and long-term measures recommended for I.S. 125 is discussed as follows, and is shown in more detail in Exhibit 7 at the end of this section.

4.1 SHORT-TERM MEASURES

➤ *Administer student pedestrian safety education program*

It is recommended that the NYCDOT Safety Education Program work with the school to educate the students on pedestrian safety, including crossing the street with the WALK phase and the meaning of the WALK – FLASHING DON'T WALK - DON'T WALK pedestrian signal sequence. The students should also be educated not to cross at mid-block locations.

➤ *Install “NO STANDING 7AM - 4PM SCHOOL DAYS” signs*

Install “NO STANDING 7AM – 4PM SCHOOL DAYS” signs for 30 feet in front of the school at the main entrance of the school. (This is a typical requirement for all NYC schools in order to provide for emergency access to and from the school.)

➤ *Install a traffic signal at 47th Avenue and 47th Place*

There is a school crosswalk located across the west leg of 47th Avenue at 47th Street, and a pedestrian crosswalk located across the east leg. I.S. 125 students were observed crossing 47th Avenue at 47th Street, and the school is immediately adjacent to the intersection. In order to determine the appropriate traffic control for the school crosswalk, a preliminary traffic signal warrant assessment was performed to assess the traffic situation and determine what type of traffic control devices would be appropriate. The traffic data collected to assess the need of a traffic signal included pedestrian and vehicle counts and a pedestrian gap study.

The results of the preliminary assessment based on traffic signal warrants 4 (pedestrian volumes) and 5 (school crossing) of the Federal MUTCD indicated the installation of a traffic signal is warranted. The results of the warrant analysis are shown in Tables 4, 5, 6, and 7 and in Exhibit 6A. The following is therefore recommended:

- Install a traffic signal for the intersection of 47th Avenue and 47th Street.

(Note: NYCDOT has confirmed that this traffic signal is warranted and has scheduled it to be installed in November 2006.)

➤ Install school crosswalks

I.S. 125 students were observed crossing at several locations where no school crosswalks currently exist. The following is therefore recommended:

- Provide a school crosswalk across the north leg of 48th Street at 46th Avenue.
- Student pedestrians are using the crosswalk located across the east leg of 47th Avenue during both morning arrival and afternoon dismissal at this intersection. Convert the existing pedestrian crosswalk across the east leg of 47th Avenue at 47th Street into a school crosswalk.

➤ Install advanced stop bars before school crosswalks

The MUTCD and New York City DOT standard for placement of a stop bar is four feet in advance of a marked crosswalk. At signalized (or stop controlled) crosswalks, the vehicle stop line can be placed farther back from the crosswalk in order to maximize visibility of pedestrians and to minimize the potential for pedestrian/vehicle conflicts. Therefore, it is recommended that stop bars be placed ten feet in advance of all signalized (or stop controlled) school crosswalks.

4.2 LONG-TERM MEASURES

➤ Install curb extensions

In order to reduce pedestrian crossing distances, curb extensions are proposed at the following locations:

- Northeast and southeast corners of 48th Avenue at its intersection with 46th Street
- Southwest corner of 48th Avenue and 47th Street intersection
- Northwest and southeast corners of 47th Avenue and 46th Street intersection
- Southwest corner of 47th Avenue and 47th Street intersection

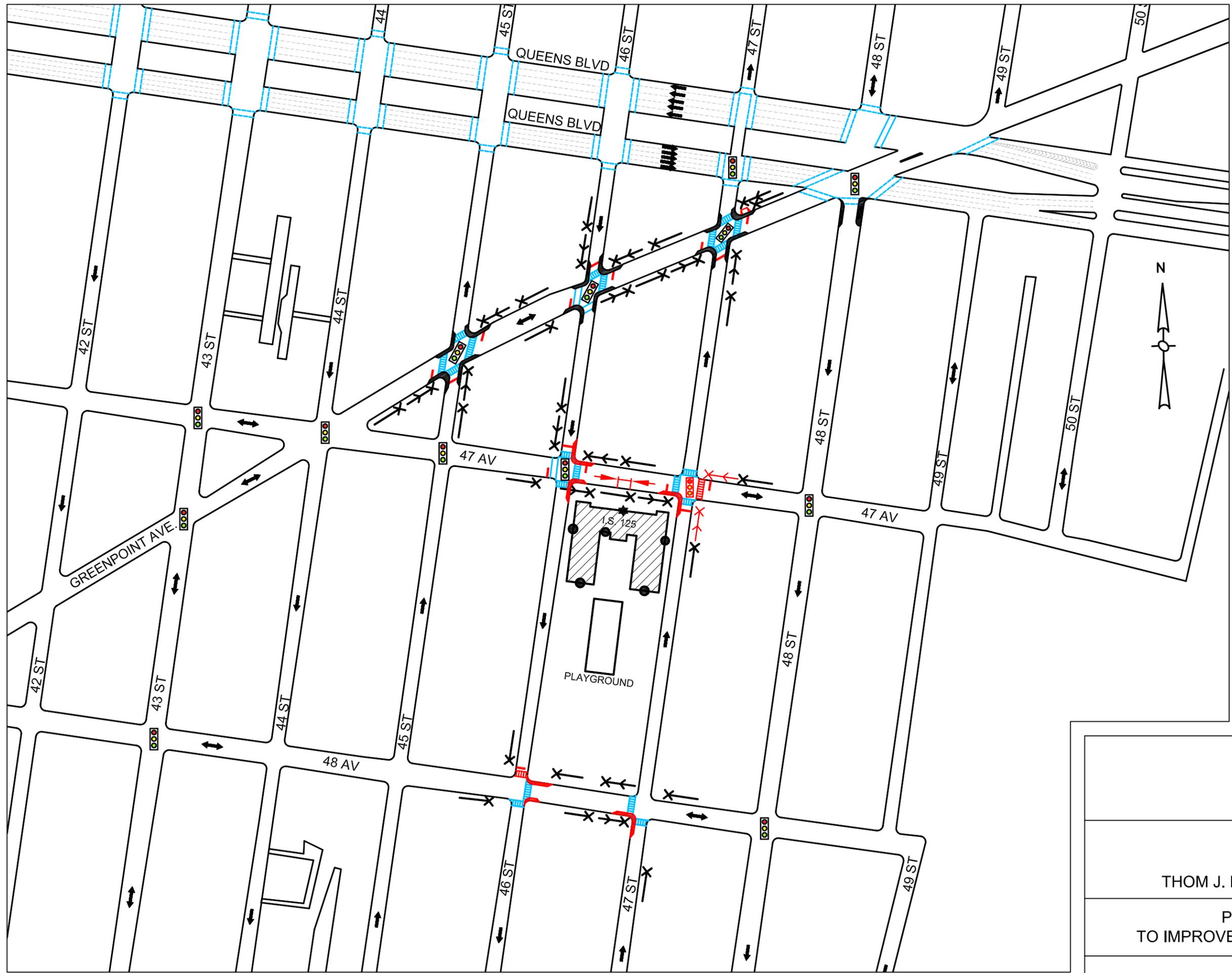
Curb extensions should be installed at the corners as shown in Exhibit 7. The purpose of curb extensions is to shorten the crossing distance for pedestrians and to reduce the speed of vehicles approaching and turning at the intersection. The curb extension will not eliminate or reduce the width of any travel lanes. Curb extensions are not proposed where they would hinder the ability of a vehicle to turn.

➤ Construct Pedestrian Ramp

A pedestrian ramp is missing on the northeast corner of Greenpoint Avenue at 47th Street, for the crosswalk located across the east leg of Greenpoint Avenue.

The following is therefore recommended:

- A pedestrian ramp should be installed on the northeast corner of Greenpoint Avenue at 47th Street for the crosswalk located across the east leg of Greenpoint Avenue.



LEGEND

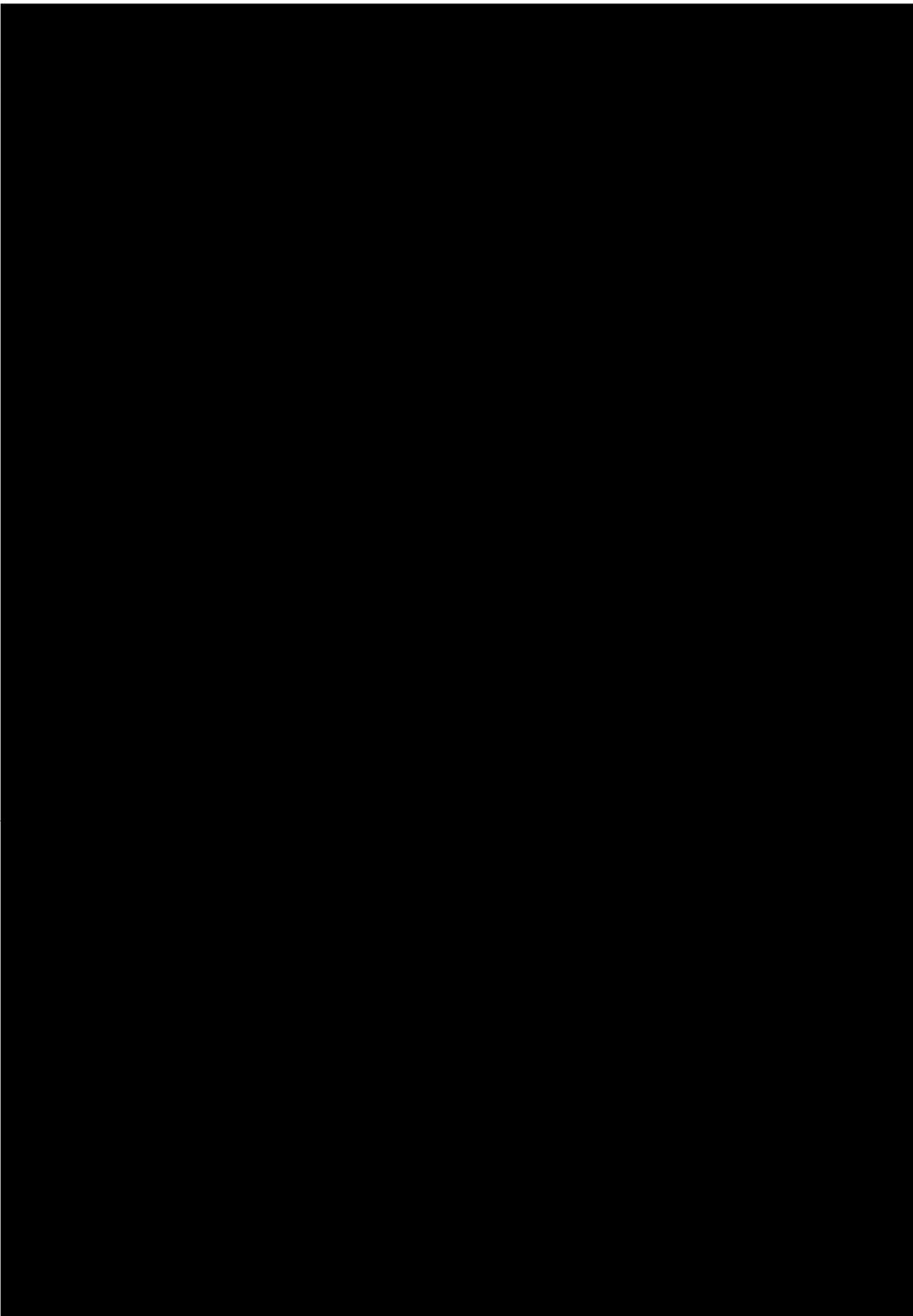
-  MAIN ENTRANCE
-  OTHER ENTRANCES
-  EXISTING TRAVEL DIRECTION
-  EXISTING ADVANCE WARNING SIGN OR SCHEDULED TO BE INSTALLED
-  EXISTING SCHOOL CROSSWALK WARNING ASSEMBLY OR SCHEDULED TO BE INSTALLED
-  EXISTING SIGNALIZED LOCATION
-  EXISTING CURB EXTENSION (NECKDOWN)
-  EXISTING SCHOOL CROSSWALK
-  EXISTING PEDESTRIAN CROSSWALK
-  EXISTING SCHOOL CROSSWALK ASSOCIATED WITH ANOTHER SCHOOL
-  PROPOSED SCHOOL CROSSWALK WARNING ASSEMBLY OR SCHEDULED TO BE INSTALLED
-  PROPOSED SCHOOL CROSSWALK
-  PROPOSED PEDESTRIAN RAMP
-  PROPOSED "NO STANDING 7:00AM - 4:00PM SCHOOL DAYS"
-  PROPOSED SIGNALIZED LOCATION
-  PROPOSED STOP LINE IN ADVANCE OF SCHOOL CROSSWALK
-  PROPOSED CURB EXTENSION (NECKDOWN)

1" = 200'

EXHIBIT 7

I.S. 125 QUEENS
 THOM J. MCCANN WOODSIDE SCHOOL
 POTENTIAL MEASURES
 TO IMPROVE STUDENT PEDESTRIAN SAFETY

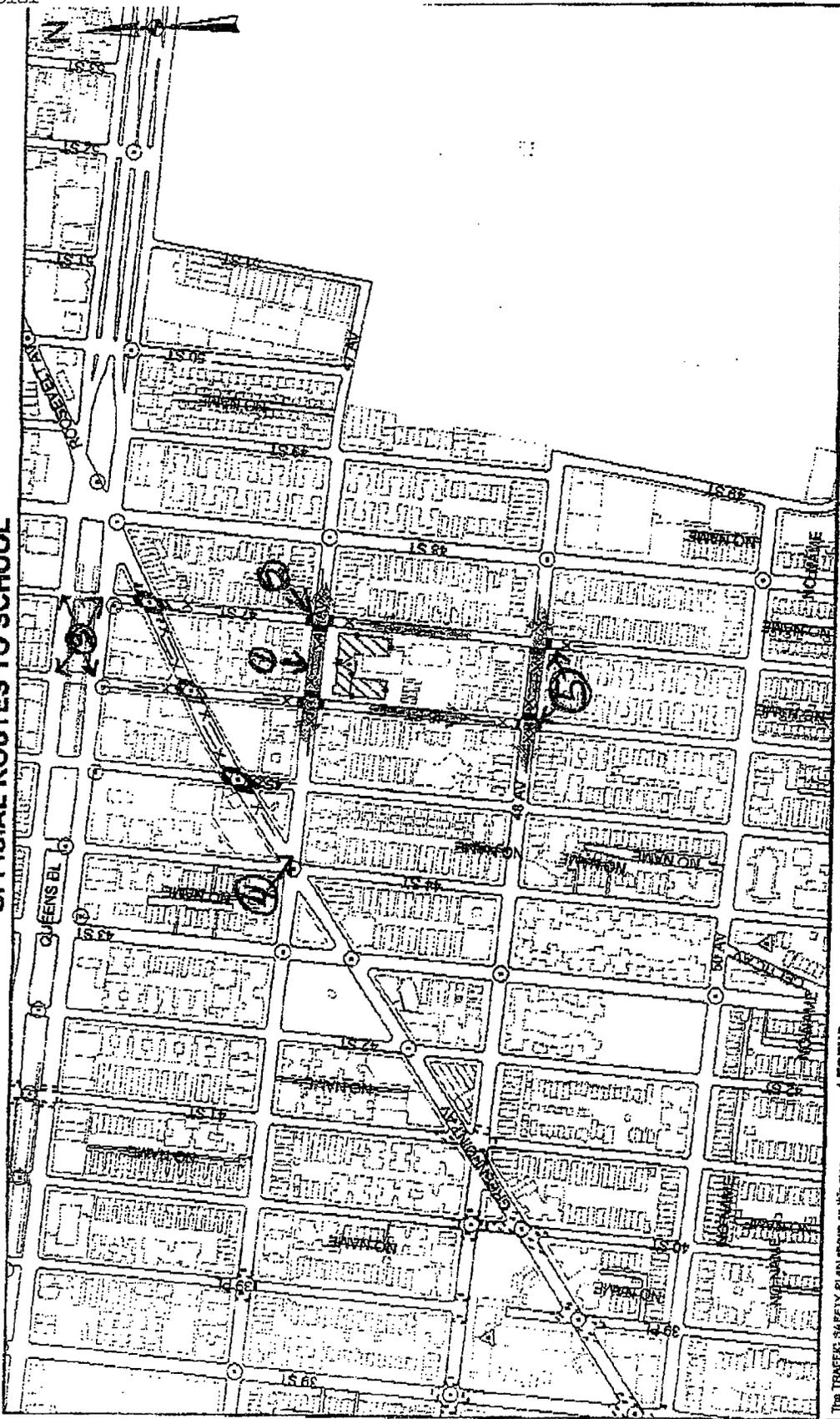
APPENDIX



NEW YORK CITY
DEPT. OF TRANSPORTATION

**TRAFFIC SAFETY PLAN
OFFICIAL ROUTES TO SCHOOL**

BUREAU OF TRAFFIC



The TRAFFIC SAFETY PLAN shown on this map was established to provide the arrangement of safety for children going to and from school. It is required that all children follow the prescribed routes and use the designated crosswalks.

- LEGEND:**
- TRAFFIC FLOW
 - ROUTE TO SCHOOL
 - ADV. WARNING SIGN
 - SCHOOL LOCATION
 - MANY SCHOOL ENTRANCE
 - OTHER SCHOOL ENTRANCES

- SCHOOL X-WALK
- PED. X-WALK
- STOP LINE
- X-WALKING ASSOCIATED WITH OTHER SCHOOLS
- SPEED HUMP

- TRAFFIC SIGNAL
- ALL-WAY STOP
- 2-WAY STOP

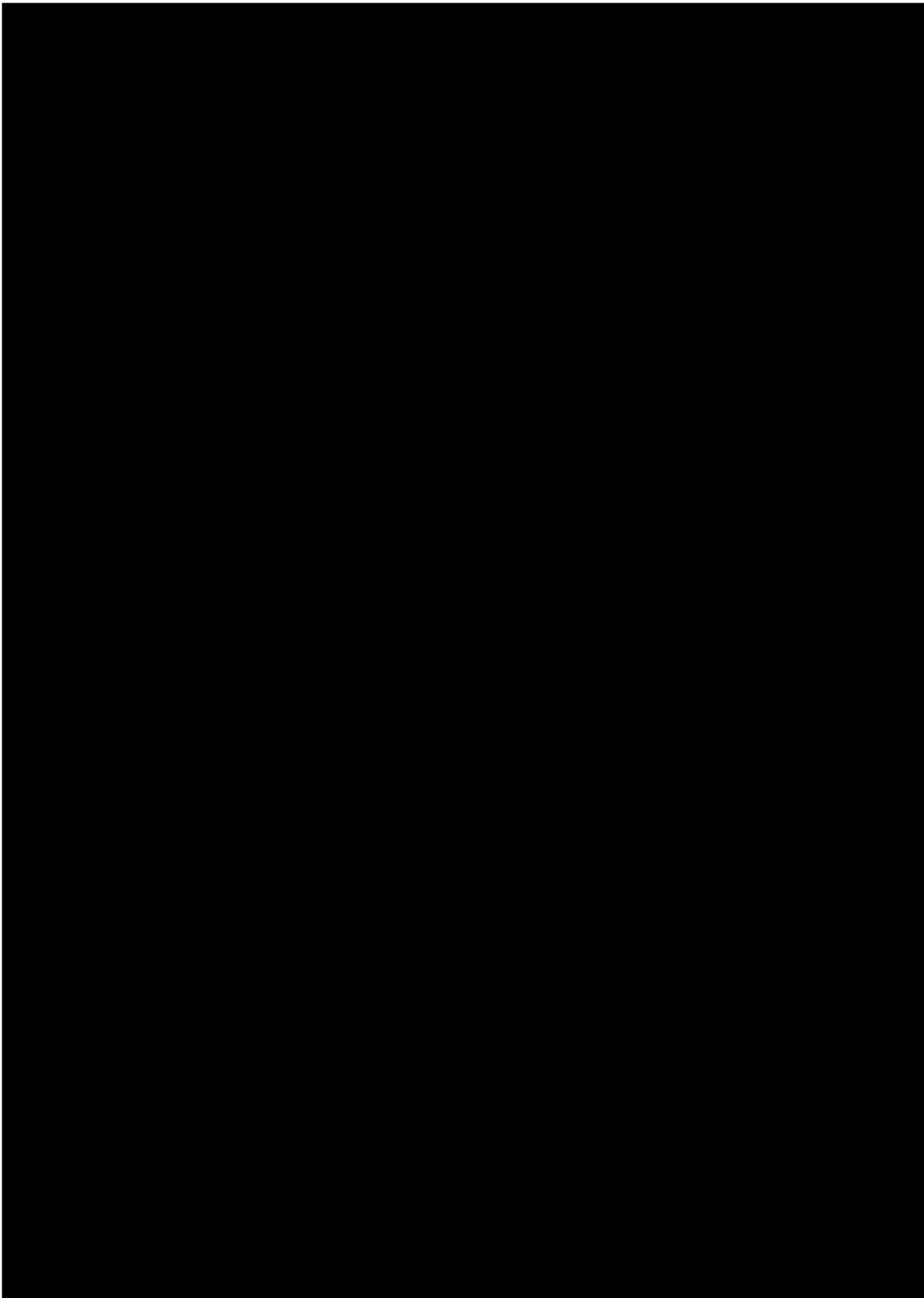
**WOODSIDE IS
I.S. 125**

Prepared by the NEW YORK CITY DEPARTMENT OF TRANSPORTATION,
165 West 44th St., COMMUNISICKER, in cooperation with SCHOOL, and
POLICE OFFICERS.

ORIG. DATE: 02/21/87
GIS COUNTY: QUESADA
REVISIONS:

DRAWING NO. _____
CC-NO. _____
NSP-EDUC. _____

COMMA BOARD, _____
PREPARED BY: _____
JULIENS, _____
108



SPOT SPEED STUDY

Date: **June 16, 2005** Time: **11:10**
 Location: **47th Avenue between 47th Street & 48th Street**
 Surveyor: **Richard Calvache & Hugo Salinas**

School: **I.S. 125**
 Direction: **Eastbound**
 Comments:

Speed S (mph)	No. of Vehicles in Group n	% of Vehicles in Group	% Cumulative Vehicles	nS	nS ²
8	0	0.0%	0.0%	0	0
9	0	0.0%	0.0%	0	0
10	0	0.0%	0.0%	0	0
11	0	0.0%	0.0%	0	0
12	0	0.0%	0.0%	0	0
13	0	0.0%	0.0%	0	0
14	0	0.0%	0.0%	0	0
15	0	0.0%	0.0%	0	0
16	0	0.0%	0.0%	0	0
17	0	0.0%	0.0%	0	0
18	0	0.0%	0.0%	0	0
19	3	4.2%	4.2%	57	1083
20	5	6.9%	11.1%	100	2000
21	8	11.1%	22.2%	168	3528
22	5	6.9%	29.2%	110	2420
23	9	12.5%	41.7%	207	4761
24	14	19.4%	61.1%	336	8064
25	10	13.9%	75.0%	250	6250
26	7	9.7%	84.7%	182	4732
27	6	8.3%	93.1%	162	4374
28	1	1.4%	94.4%	28	784
29	0	0.0%	94.4%	0	0
30	4	5.6%	100.0%	120	3600
31	0	0.0%	100.0%	0	0
32	0	0.0%	100.0%	0	0
33	0	0.0%	100.0%	0	0
34	0	0.0%	100.0%	0	0
35	0	0.0%	100.0%	0	0
36	0	0.0%	100.0%	0	0
37	0	0.0%	100.0%	0	0
38	0	0.0%	100.0%	0	0
39	0	0.0%	100.0%	0	0
40	0	0.0%	100.0%	0	0
41	0	0.0%	100.0%	0	0
42	0	0.0%	100.0%	0	0
43	0	0.0%	100.0%	0	0
44	0	0.0%	100.0%	0	0
45	0	0.0%	100.0%	0	0
46	0	0.0%	100.0%	0	0
47	0	0.0%	100.0%	0	0
48	0	0.0%	100.0%	0	0
49	0	0.0%	100.0%	0	0
50	0	0.0%	100.0%	0	0
51	0	0.0%	100.0%	0	0
52	0	0.0%	100.0%	0	0
53	0	0.0%	100.0%	0	0
54	0	0.0%	100.0%	0	0
55	0	0.0%	100.0%	0	0
56	0	0.0%	100.0%	0	0
	72	100.0%		1720	41596

Mean Speed = 23.9 mph
 Standard Deviation = 2.7 mph
 Margin of Error (95% Confidence) = ± 0.6 mph

Median Speed = 23.9 mph
 15th Percentile Speed = 21.1 mph
 85th Percentile Speed = 26.7 mph

SPOT SPEED STUDY

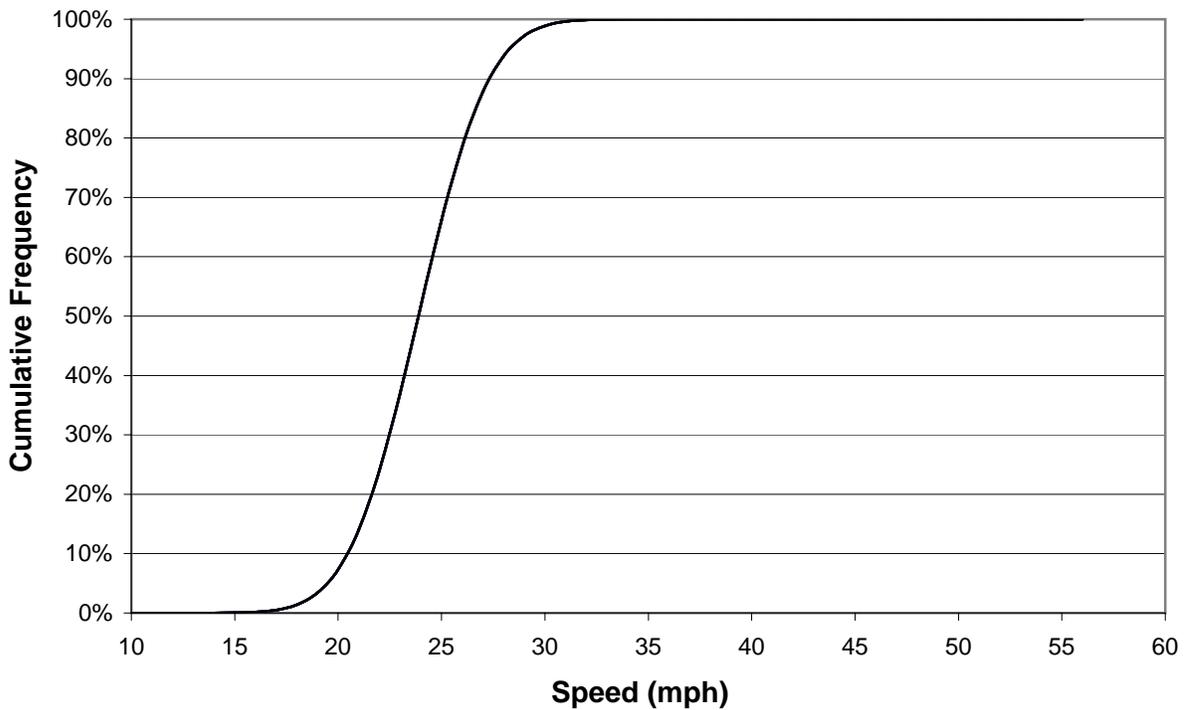
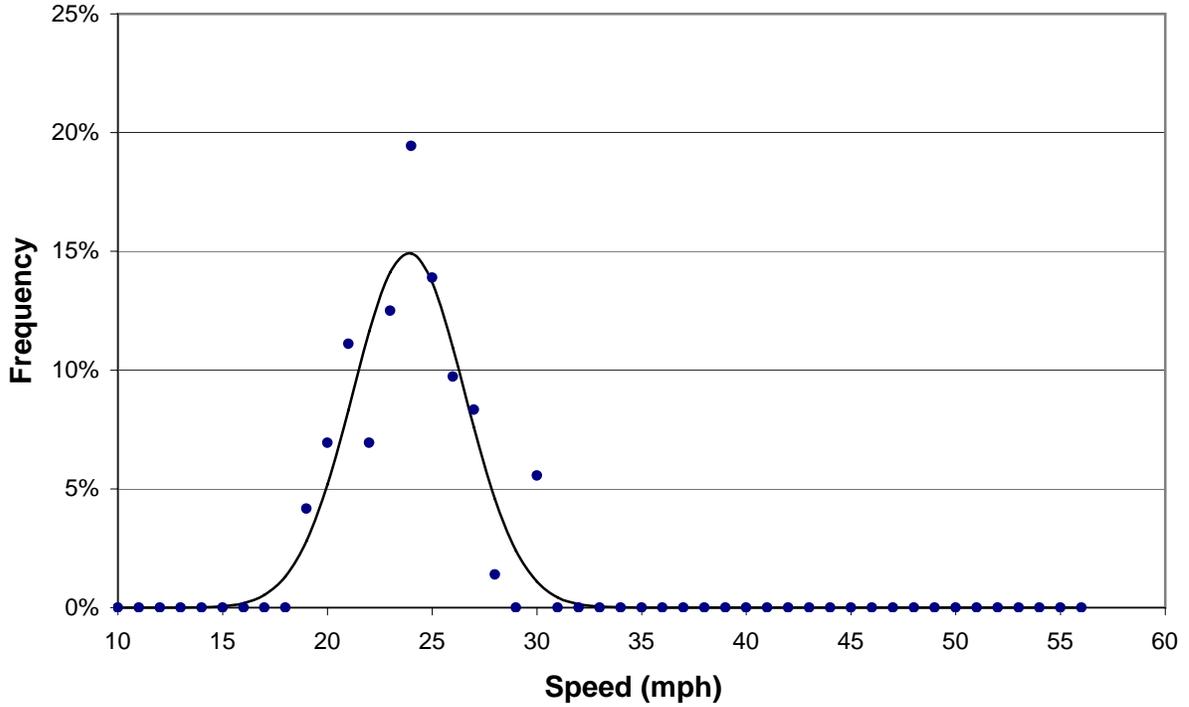
Date: **June 16, 2005**
Location: **47th Avenue between 47th Street & 48th Street**
Surveyor: **Richard Calvache & Hugo Salinas**

Time: **11:10**

School: **I.S. 125**
Direction: **Eastbound**
Comments:

Mean Speed = 23.9 mph
Standard Deviation = 2.7 mph
Margin of Error (95% Confidence) = ± 0.6 mph

Median Speed = 23.9 mph
15th Percentile Speed = 21.1 mph
85th Percentile Speed = 26.7 mph



SPOT SPEED STUDY

Date: **June 16, 2005** Time: **11:10**
 Location: **47th Avenue between 47th Street & 48th Street**
 Surveyor: **Richard Calvache & Hugo Salinas**

School: **I.S. 125**
 Direction: **Westbound**
 Comments:

Speed S (mph)	No. of Vehicles in Group n	% of Vehicles in Group	% Cumulative Vehicles	nS	nS ²
8	0	0.0%	0.0%	0	0
9	0	0.0%	0.0%	0	0
10	0	0.0%	0.0%	0	0
11	0	0.0%	0.0%	0	0
12	0	0.0%	0.0%	0	0
13	0	0.0%	0.0%	0	0
14	0	0.0%	0.0%	0	0
15	0	0.0%	0.0%	0	0
16	0	0.0%	0.0%	0	0
17	1	1.2%	1.2%	17	289
18	0	0.0%	1.2%	0	0
19	0	0.0%	1.2%	0	0
20	5	6.0%	7.1%	100	2000
21	1	1.2%	8.3%	21	441
22	11	13.1%	21.4%	242	5324
23	17	20.2%	41.7%	391	8993
24	8	9.5%	51.2%	192	4608
25	9	10.7%	61.9%	225	5625
26	7	8.3%	70.2%	182	4732
27	6	7.1%	77.4%	162	4374
28	7	8.3%	85.7%	196	5488
29	5	6.0%	91.7%	145	4205
30	3	3.6%	95.2%	90	2700
31	3	3.6%	98.8%	93	2883
32	0	0.0%	98.8%	0	0
33	1	1.2%	100.0%	33	1089
34	0	0.0%	100.0%	0	0
35	0	0.0%	100.0%	0	0
36	0	0.0%	100.0%	0	0
37	0	0.0%	100.0%	0	0
38	0	0.0%	100.0%	0	0
39	0	0.0%	100.0%	0	0
40	0	0.0%	100.0%	0	0
41	0	0.0%	100.0%	0	0
42	0	0.0%	100.0%	0	0
43	0	0.0%	100.0%	0	0
44	0	0.0%	100.0%	0	0
45	0	0.0%	100.0%	0	0
46	0	0.0%	100.0%	0	0
47	0	0.0%	100.0%	0	0
48	0	0.0%	100.0%	0	0
49	0	0.0%	100.0%	0	0
50	0	0.0%	100.0%	0	0
51	0	0.0%	100.0%	0	0
52	0	0.0%	100.0%	0	0
53	0	0.0%	100.0%	0	0
54	0	0.0%	100.0%	0	0
55	0	0.0%	100.0%	0	0
56	0	0.0%	100.0%	0	0
	84	100.0%		2089	52751

Mean Speed = 24.9 mph
 Standard Deviation = 3.1 mph
 Margin of Error (95% Confidence) = ± 0.7 mph

Median Speed = 24.9 mph
 15th Percentile Speed = 21.7 mph
 85th Percentile Speed = 28.1 mph

SPOT SPEED STUDY

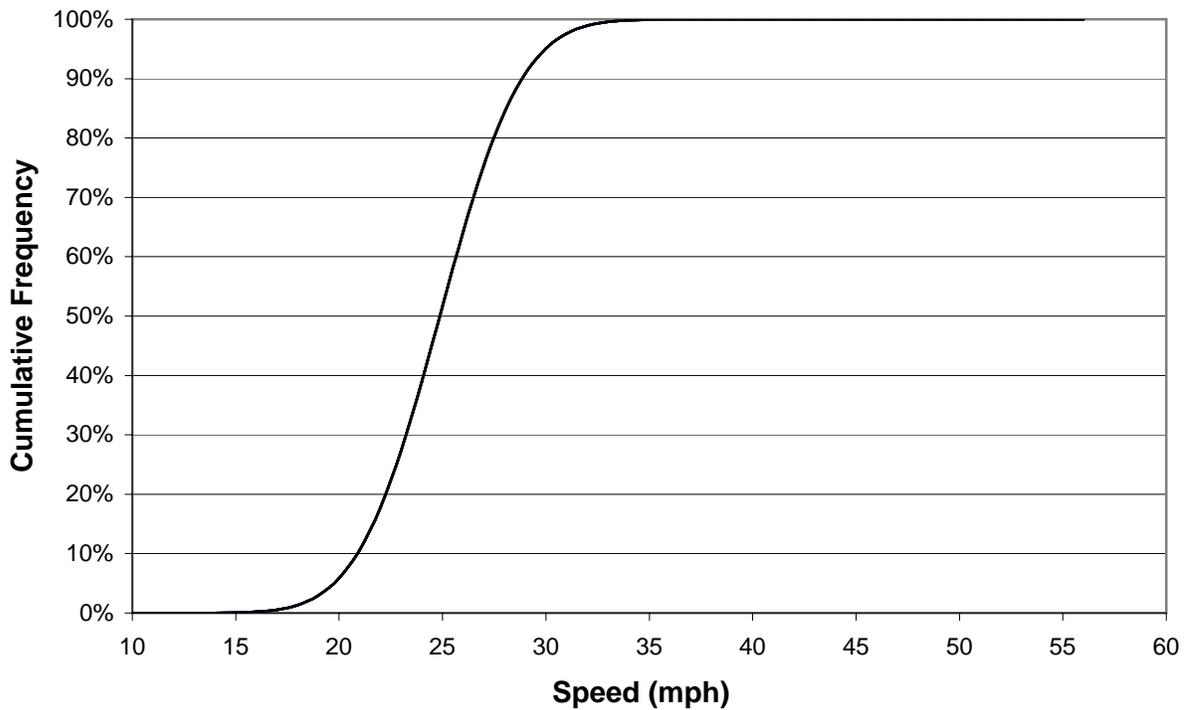
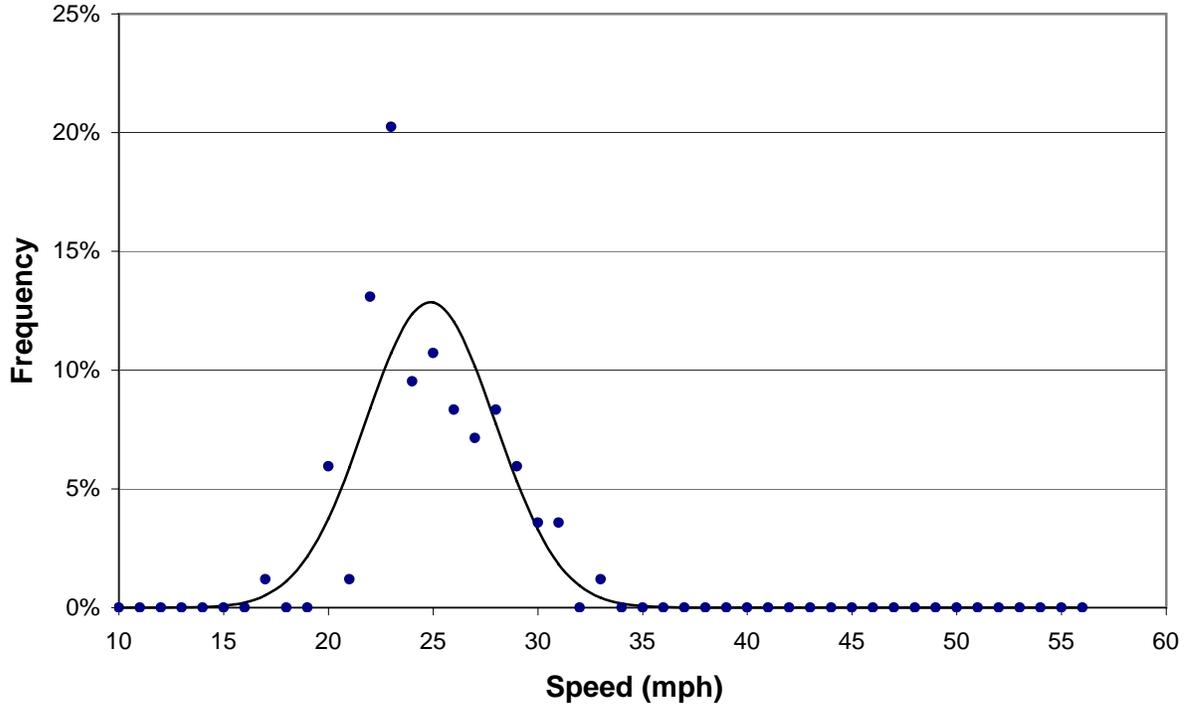
Date: June 16, 2005
Location: 47th Avenue between 47th Street & 48th Street
Surveyor: Richard Calvache & Hugo Salinas

Time: 11:10

School: I.S. 125
Direction: Westbound
Comments:

Mean Speed = 24.9 mph
Standard Deviation = 3.1 mph
Margin of Error (95% Confidence) = ± 0.7 mph

Median Speed = 24.9 mph
15th Percentile Speed = 21.7 mph
85th Percentile Speed = 28.1 mph



SPOT SPEED STUDY

Date: **June 16, 2005**
 Location: **47th Street between 48th Avenue and 47th Avenue**
 Surveyor: **Richard Calvache & Hugo Salinas**

Time: **10am**

School: **I.S. 125**
 Direction: **Northbound**
 Comments:

Speed S (mph)	No. of Vehicles in Group n	% of Vehicles in Group	% Cumulative Vehicles	nS	nS ²
8	0	0.0%	0.0%	0	0
9	0	0.0%	0.0%	0	0
10	0	0.0%	0.0%	0	0
11	0	0.0%	0.0%	0	0
12	0	0.0%	0.0%	0	0
13	0	0.0%	0.0%	0	0
14	0	0.0%	0.0%	0	0
15	0	0.0%	0.0%	0	0
16	3	4.9%	4.9%	48	768
17	0	0.0%	4.9%	0	0
18	4	6.6%	11.5%	72	1296
19	2	3.3%	14.8%	38	722
20	12	19.7%	34.4%	240	4800
21	4	6.6%	41.0%	84	1764
22	6	9.8%	50.8%	132	2904
23	7	11.5%	62.3%	161	3703
24	4	6.6%	68.9%	96	2304
25	6	9.8%	78.7%	150	3750
26	3	4.9%	83.6%	78	2028
27	3	4.9%	88.5%	81	2187
28	4	6.6%	95.1%	112	3136
29	1	1.6%	96.7%	29	841
30	0	0.0%	96.7%	0	0
31	0	0.0%	96.7%	0	0
32	1	1.6%	98.4%	32	1024
33	1	1.6%	100.0%	33	1089
34	0	0.0%	100.0%	0	0
35	0	0.0%	100.0%	0	0
36	0	0.0%	100.0%	0	0
37	0	0.0%	100.0%	0	0
38	0	0.0%	100.0%	0	0
39	0	0.0%	100.0%	0	0
40	0	0.0%	100.0%	0	0
41	0	0.0%	100.0%	0	0
42	0	0.0%	100.0%	0	0
43	0	0.0%	100.0%	0	0
44	0	0.0%	100.0%	0	0
45	0	0.0%	100.0%	0	0
46	0	0.0%	100.0%	0	0
47	0	0.0%	100.0%	0	0
48	0	0.0%	100.0%	0	0
49	0	0.0%	100.0%	0	0
50	0	0.0%	100.0%	0	0
51	0	0.0%	100.0%	0	0
52	0	0.0%	100.0%	0	0
53	0	0.0%	100.0%	0	0
54	0	0.0%	100.0%	0	0
55	0	0.0%	100.0%	0	0
56	0	0.0%	100.0%	0	0
	61	100.0%		1386	32316

Mean Speed = 22.7 mph
 Standard Deviation = 3.7 mph
 Margin of Error (95% Confidence) = ± 0.9 mph

Median Speed = 22.7 mph
 15th Percentile Speed = 18.9 mph
 85th Percentile Speed = 26.6 mph

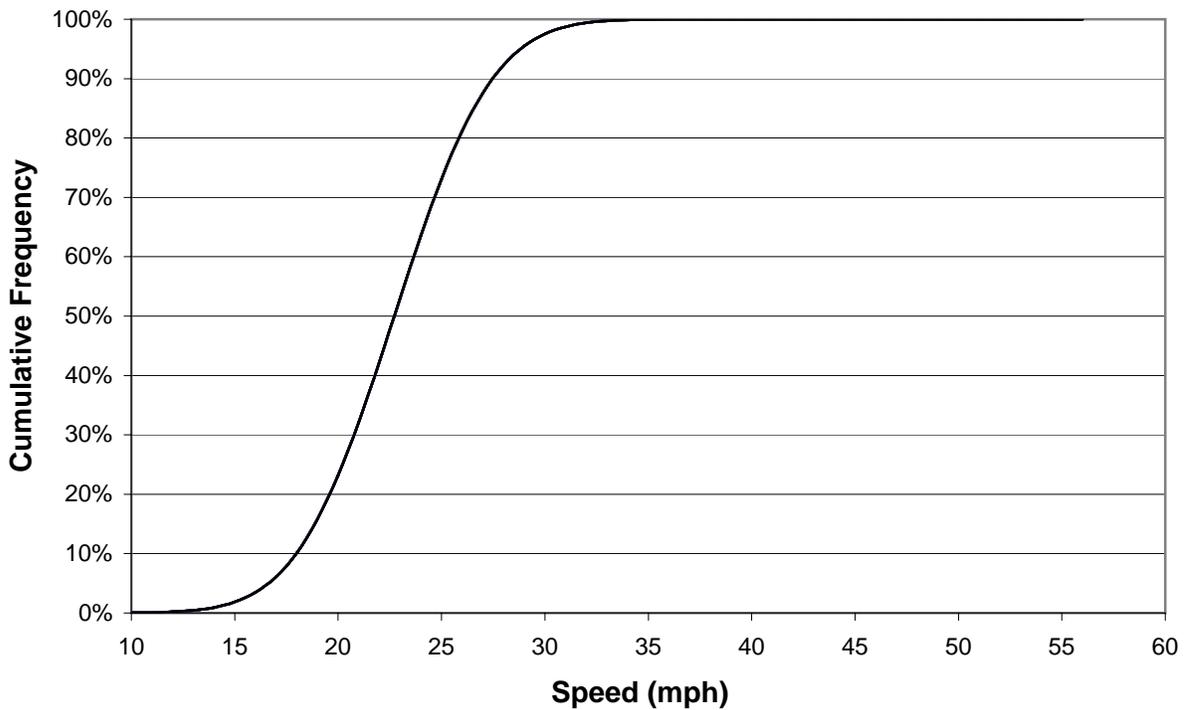
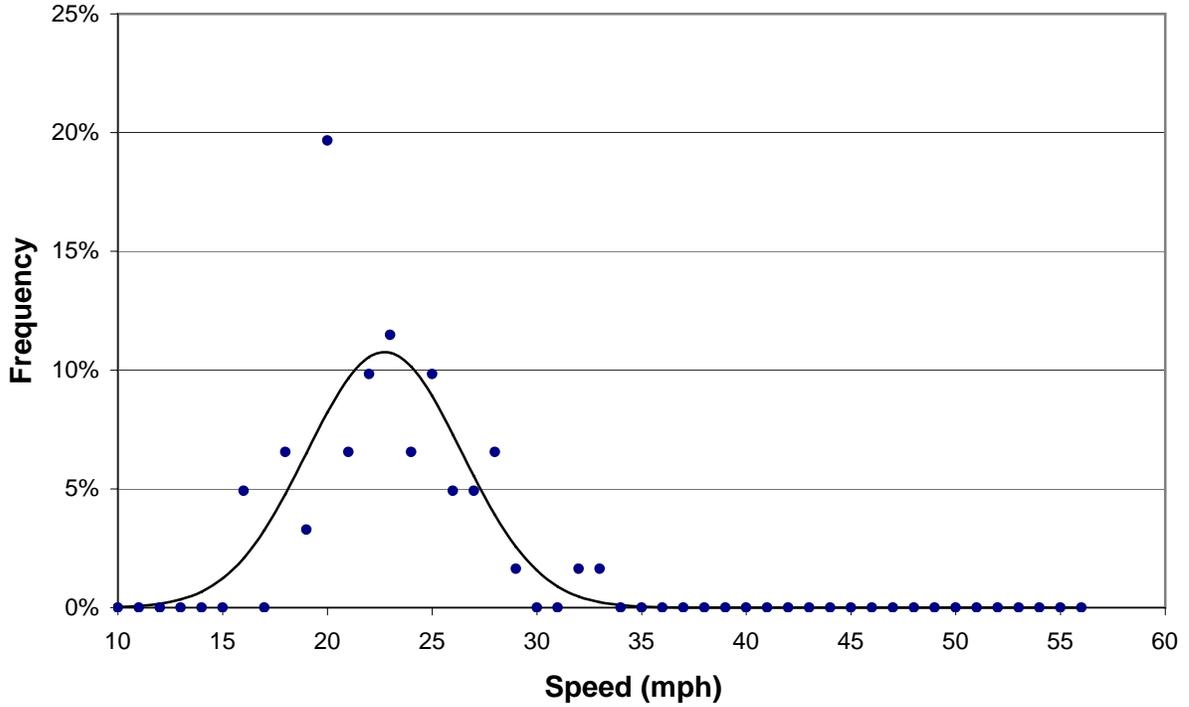
SPOT SPEED STUDY

Date: **June 16, 2005** Time: **10am**
 Location: **47th Street between 48th Avenue and 47th Avenue**
 Surveyor: **Richard Calvache & Hugo Salinas**

School: **I.S. 125**
 Direction: **Northbound**
 Comments:

Mean Speed = 22.7 mph
 Standard Deviation = 3.7 mph
 Margin of Error (95% Confidence) = ± 0.9 mph

Median Speed = 22.7 mph
 15th Percentile Speed = 18.9 mph
 85th Percentile Speed = 26.6 mph



SPOT SPEED STUDY

Date: **June 16, 2005** Time: **12:20**
 Location: **48th Avenue between 47th Street & 46th Street**
 Surveyor: **Richard Calvache & Hugo Salinas**

School: **I.S. 125**
 Direction: **Eastbound**
 Comments:

Speed S (mph)	No. of Vehicles in Group n	% of Vehicles in Group	% Cumulative Vehicles	nS	nS ²
8	0	0.0%	0.0%	0	0
9	0	0.0%	0.0%	0	0
10	0	0.0%	0.0%	0	0
11	0	0.0%	0.0%	0	0
12	0	0.0%	0.0%	0	0
13	0	0.0%	0.0%	0	0
14	0	0.0%	0.0%	0	0
15	0	0.0%	0.0%	0	0
16	0	0.0%	0.0%	0	0
17	0	0.0%	0.0%	0	0
18	0	0.0%	0.0%	0	0
19	0	0.0%	0.0%	0	0
20	1	2.0%	2.0%	20	400
21	4	8.0%	10.0%	84	1764
22	5	10.0%	20.0%	110	2420
23	0	0.0%	20.0%	0	0
24	10	20.0%	40.0%	240	5760
25	3	6.0%	46.0%	75	1875
26	6	12.0%	58.0%	156	4056
27	3	6.0%	64.0%	81	2187
28	8	16.0%	80.0%	224	6272
29	3	6.0%	86.0%	87	2523
30	6	12.0%	98.0%	180	5400
31	0	0.0%	98.0%	0	0
32	0	0.0%	98.0%	0	0
33	1	2.0%	100.0%	33	1089
34	0	0.0%	100.0%	0	0
35	0	0.0%	100.0%	0	0
36	0	0.0%	100.0%	0	0
37	0	0.0%	100.0%	0	0
38	0	0.0%	100.0%	0	0
39	0	0.0%	100.0%	0	0
40	0	0.0%	100.0%	0	0
41	0	0.0%	100.0%	0	0
42	0	0.0%	100.0%	0	0
43	0	0.0%	100.0%	0	0
44	0	0.0%	100.0%	0	0
45	0	0.0%	100.0%	0	0
46	0	0.0%	100.0%	0	0
47	0	0.0%	100.0%	0	0
48	0	0.0%	100.0%	0	0
49	0	0.0%	100.0%	0	0
50	0	0.0%	100.0%	0	0
51	0	0.0%	100.0%	0	0
52	0	0.0%	100.0%	0	0
53	0	0.0%	100.0%	0	0
54	0	0.0%	100.0%	0	0
55	0	0.0%	100.0%	0	0
56	0	0.0%	100.0%	0	0
	50	100.0%		1290	33746

Mean Speed = 25.8 mph
 Standard Deviation = 3.1 mph
 Margin of Error (95% Confidence) = ± 0.9 mph

Median Speed = 25.8 mph
 15th Percentile Speed = 22.6 mph
 85th Percentile Speed = 29.0 mph

SPOT SPEED STUDY

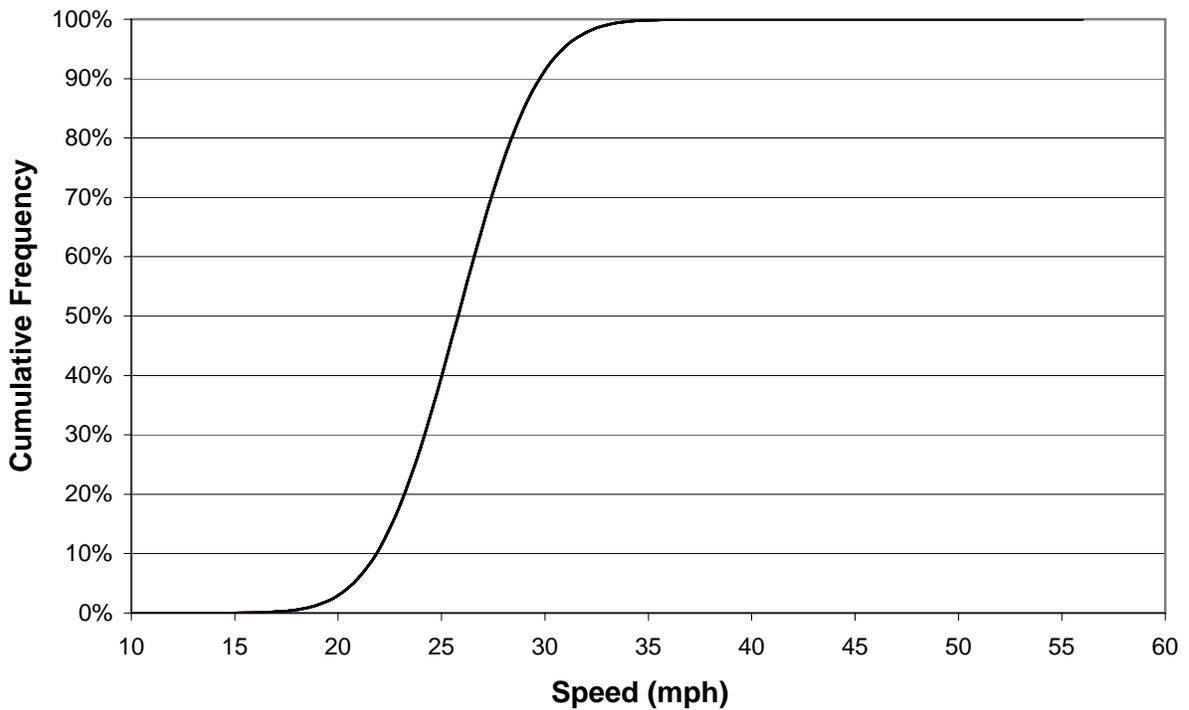
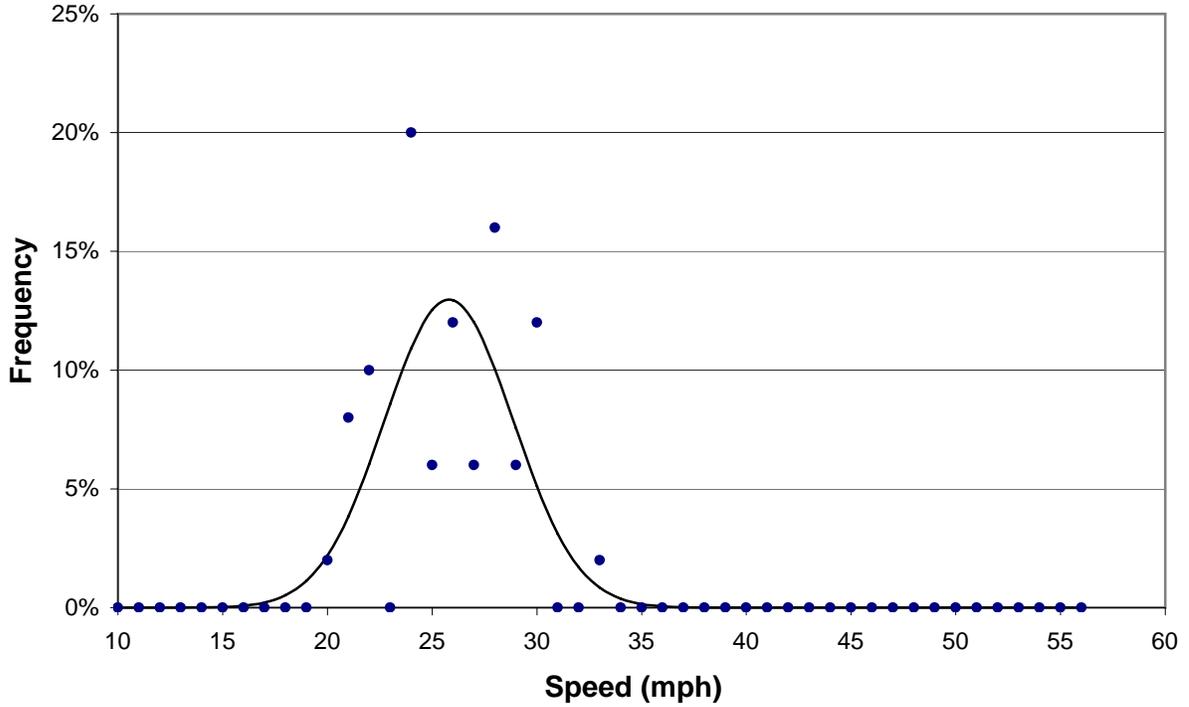
Date: **June 16, 2005**
 Location: **48th Avenue between 47th Street & 46th Street**
 Surveyor: **Richard Calvache & Hugo Salinas**

Time: **12:20**

School: **I.S. 125**
 Direction: **Eastbound**
 Comments:

Mean Speed = 25.8 mph
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Median Speed = 25.8 mph
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SPOT SPEED STUDY

Date: **June 16, 2005** Time: **12:20**
 Location: **48th Avenue between 47th Street & 46th Street**
 Surveyor: **Richard Calvache & Hugo Salinas**

School: **I.S. 125**
 Direction: **Westbound**
 Comments:

Speed S (mph)	No. of Vehicles in Group n	% of Vehicles in Group	% Cumulative Vehicles	nS	nS ²
8	0	0.0%	0.0%	0	0
9	0	0.0%	0.0%	0	0
10	0	0.0%	0.0%	0	0
11	0	0.0%	0.0%	0	0
12	0	0.0%	0.0%	0	0
13	0	0.0%	0.0%	0	0
14	0	0.0%	0.0%	0	0
15	0	0.0%	0.0%	0	0
16	0	0.0%	0.0%	0	0
17	1	1.8%	1.8%	17	289
18	0	0.0%	1.8%	0	0
19	2	3.6%	5.4%	38	722
20	1	1.8%	7.1%	20	400
21	4	7.1%	14.3%	84	1764
22	7	12.5%	26.8%	154	3388
23	12	21.4%	48.2%	276	6348
24	5	8.9%	57.1%	120	2880
25	10	17.9%	75.0%	250	6250
26	2	3.6%	78.6%	52	1352
27	5	8.9%	87.5%	135	3645
28	1	1.8%	89.3%	28	784
29	0	0.0%	89.3%	0	0
30	2	3.6%	92.9%	60	1800
31	0	0.0%	92.9%	0	0
32	2	3.6%	96.4%	64	2048
33	2	3.6%	100.0%	66	2178
34	0	0.0%	100.0%	0	0
35	0	0.0%	100.0%	0	0
36	0	0.0%	100.0%	0	0
37	0	0.0%	100.0%	0	0
38	0	0.0%	100.0%	0	0
39	0	0.0%	100.0%	0	0
40	0	0.0%	100.0%	0	0
41	0	0.0%	100.0%	0	0
42	0	0.0%	100.0%	0	0
43	0	0.0%	100.0%	0	0
44	0	0.0%	100.0%	0	0
45	0	0.0%	100.0%	0	0
46	0	0.0%	100.0%	0	0
47	0	0.0%	100.0%	0	0
48	0	0.0%	100.0%	0	0
49	0	0.0%	100.0%	0	0
50	0	0.0%	100.0%	0	0
51	0	0.0%	100.0%	0	0
52	0	0.0%	100.0%	0	0
53	0	0.0%	100.0%	0	0
54	0	0.0%	100.0%	0	0
55	0	0.0%	100.0%	0	0
56	0	0.0%	100.0%	0	0
	56	100.0%		1364	33848

Mean Speed = 24.4 mph
 Standard Deviation = 3.4 mph
 Margin of Error (95% Confidence) = ± 0.9 mph

Median Speed = 24.4 mph
 15th Percentile Speed = 20.9 mph
 85th Percentile Speed = 27.9 mph

SPOT SPEED STUDY

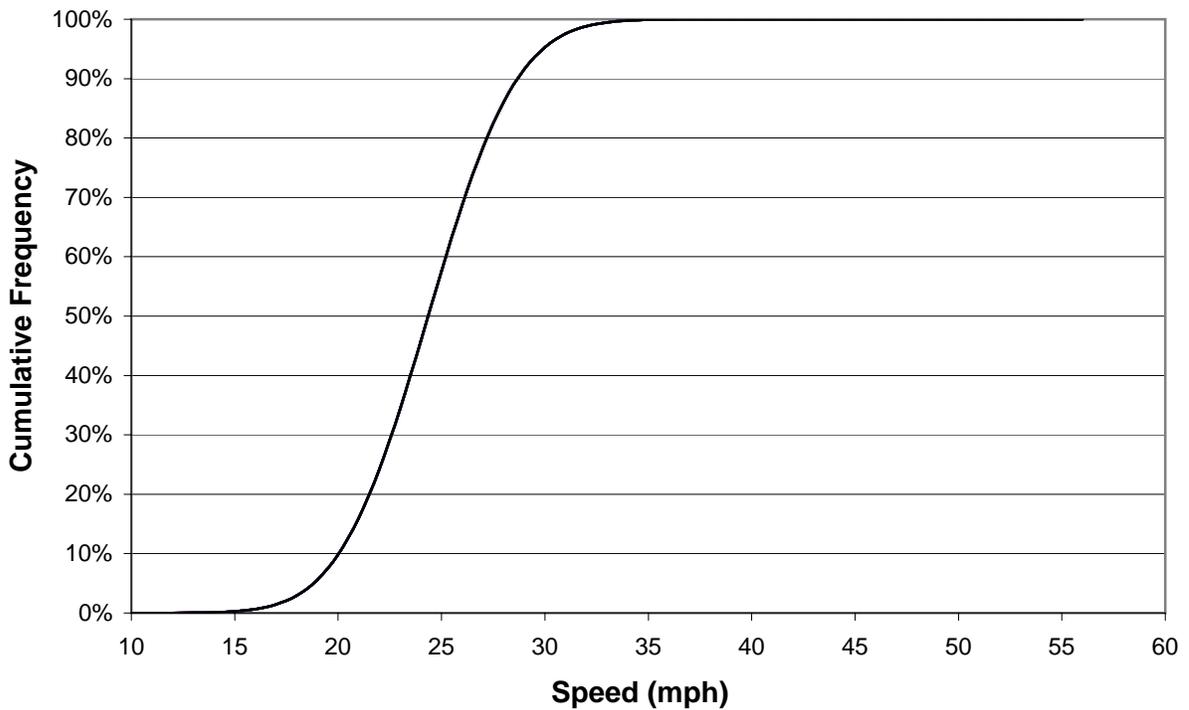
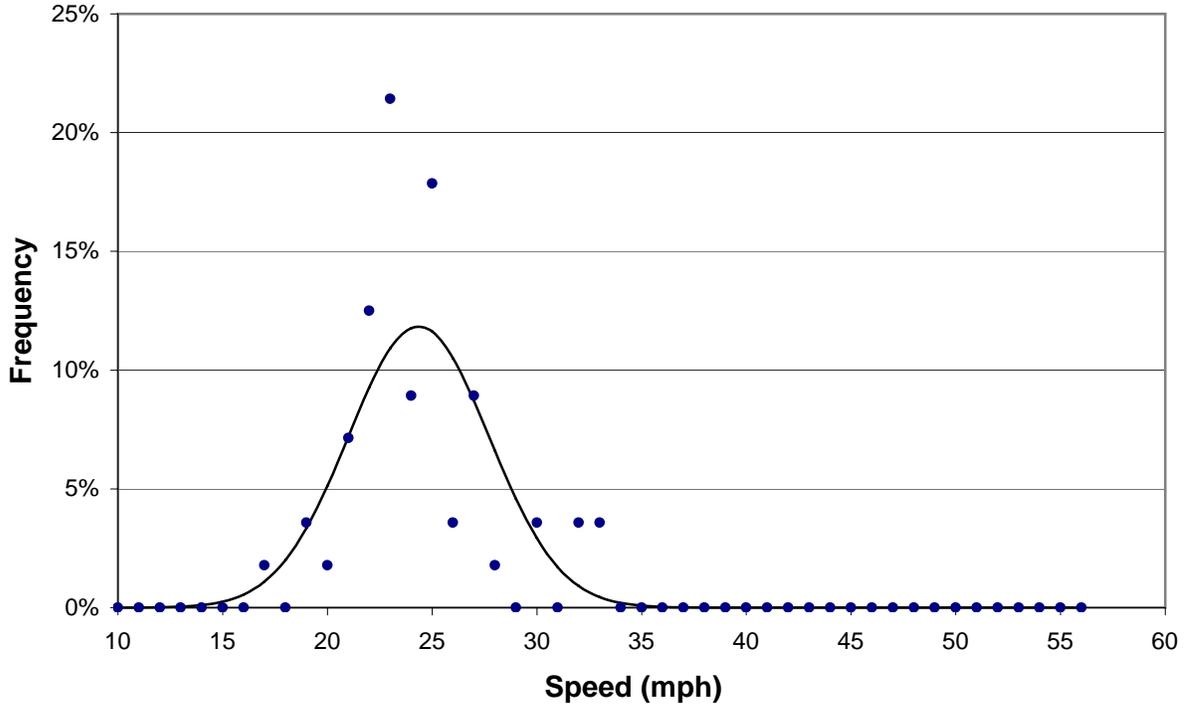
Date: **June 16, 2005**
 Location: **48th Avenue between 47th Street & 46th Street**
 Surveyor: **Richard Calvache & Hugo Salinas**

Time: **12:20**

School: **I.S. 125**
 Direction: **Westbound**
 Comments:

Mean Speed = 24.4 mph
 Standard Deviation = 3.4 mph
 Margin of Error (95% Confidence) = ± 0.9 mph

Median Speed = 24.4 mph
 15th Percentile Speed = 20.9 mph
 85th Percentile Speed = 27.9 mph



DOT (SIGNALS)
 INTERSECTION CONTROL UNIT (ICU)
 34-02 QUEENS BLVD L.I.C. 2nd FLOOR

File Name : untitled67
 Site Code : 00000000
 Start Date : 08/08/2006
 Page No : 1

7:45-8:45 AM

Directions Printed: Direction 1

Start Time	Volume	3-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25	26-27	28-29	>29	In-L Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5	2.0	2.0	
08:00 AM	0	7	12	26	26	23	16	9	8	10	8	10	14	9	2	52	
Grand Total	0	7	12	26	26	23	16	9	8	10	8	10	14	9	2	52	
Total		3.0	5.2	11.2	11.2	9.9	5.9	3.9	3.4	4.5	3.4	4.3	6.0	3.9	0.9	22.4	

48 Ave @ 46 St

EAST LEG = 44'
 TOTAL GAPS = 105/hr

48 AVE @ 46 ST
 Han

GAP STUDY FIELD SHEET

Date: June 16, 2005

Location: 1.5 125-47 Ave & 47 St

Gap Information:

Crossing Distance	<u>45</u>	ft
Reaction Time	<u>3</u>	sec
Walking Speed	<u>3</u>	ft/sec
Minimum Acceptable Gap	<u>18</u>	sec

Gap Survey:

Time:	From: <u>7:45 AM</u>	To: <u>8:15 AM</u>	
Gap (sec)	Tally		Total
10			32
11			6
12			5
13			2
14			1
15			3
16			
17			
18			
19			
20			
21			1 x 1 = 1
22			
23			
24			
25			
26			
27			1 x 2 = 2
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44		total for 30 min	3
45		total for 1 hour	6