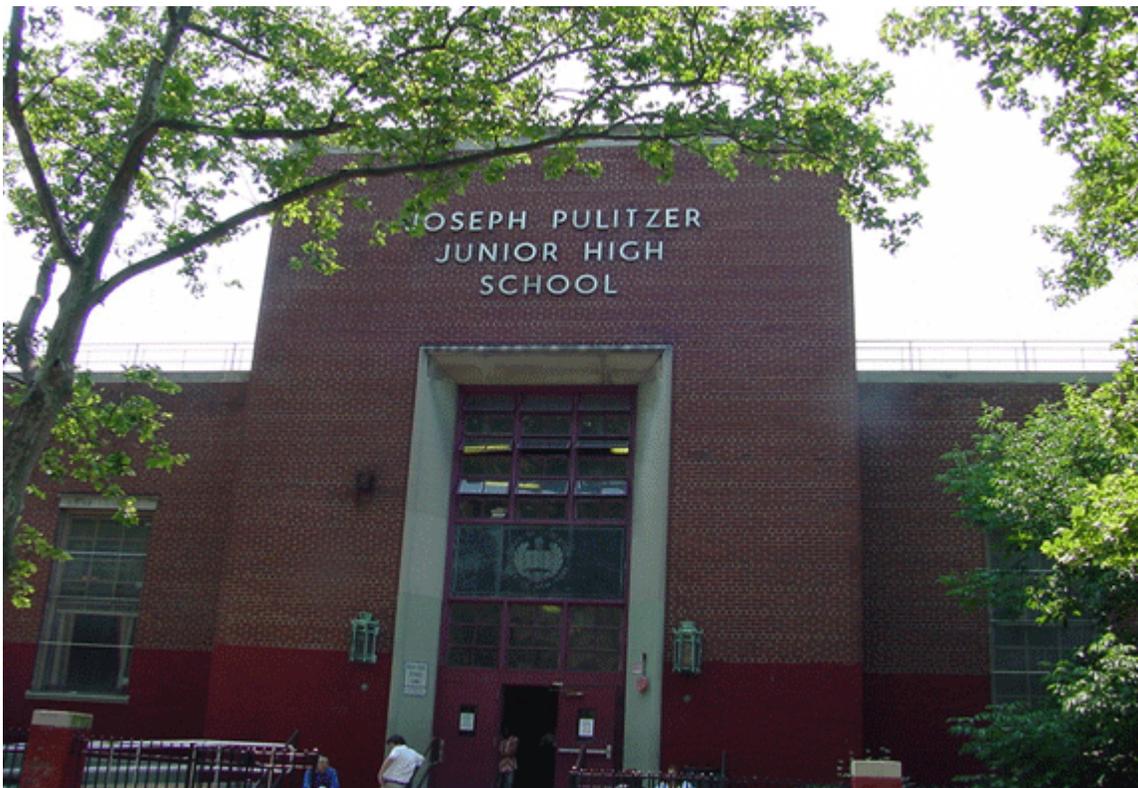


**New York City Department of Transportation
Office of School Safety Engineering**



School Safety Engineering Project

FINAL REPORT: I.S 145 (Joseph Pulitzer School), Queens



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



March 22, 2006

**School Safety Engineering Project
Final Report: I.S. 145, Queens**

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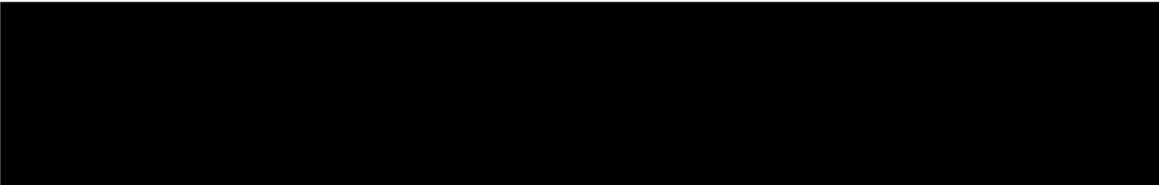
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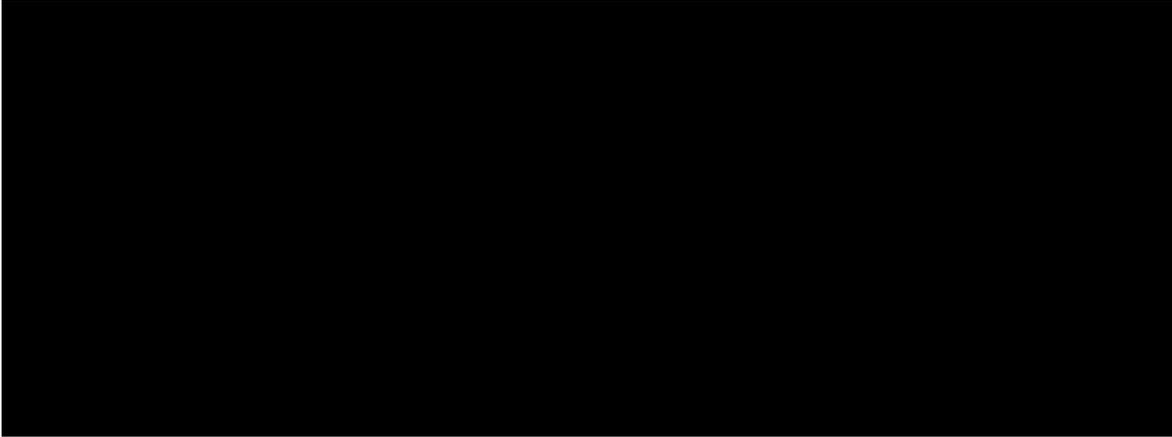
1. INTRODUCTION

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. 145 (Joseph Pulitzer School) in 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, at the end of this section, shows an aerial view of the neighborhood surrounding the school. I.S. 145 is bounded by Northern Boulevard to the north, 34th Avenue to the south, 79th Street to the west, and 80th Street to the east. The area surrounding the school is generally residential in nature, with high-density apartment buildings. Northern Boulevard has significant commercial activities and carries considerable traffic volumes. Vendors selling food are located at dismissal times in various areas surrounding the school.



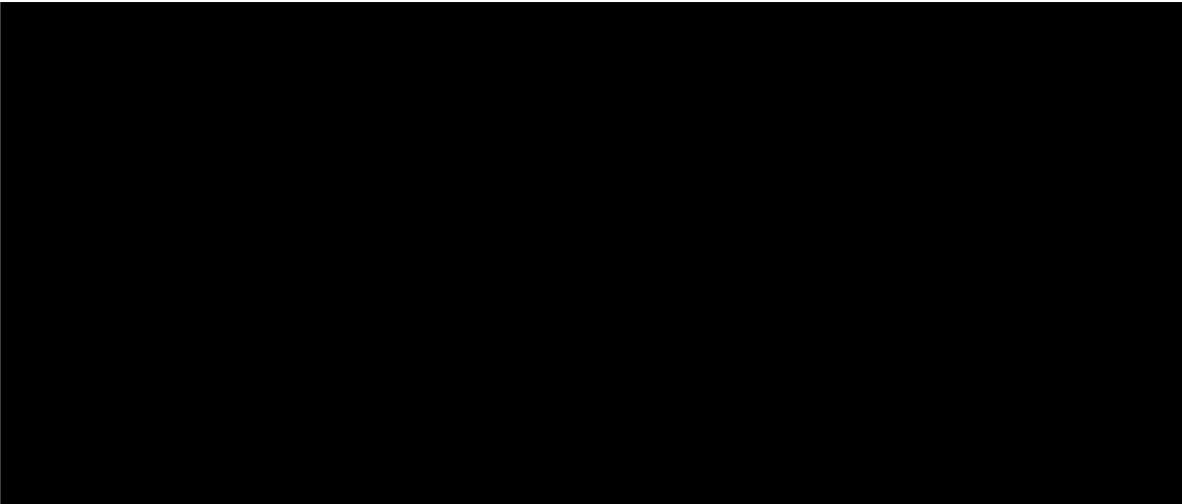
Figure 1: Looking south on 80th Street (school building is to the right)

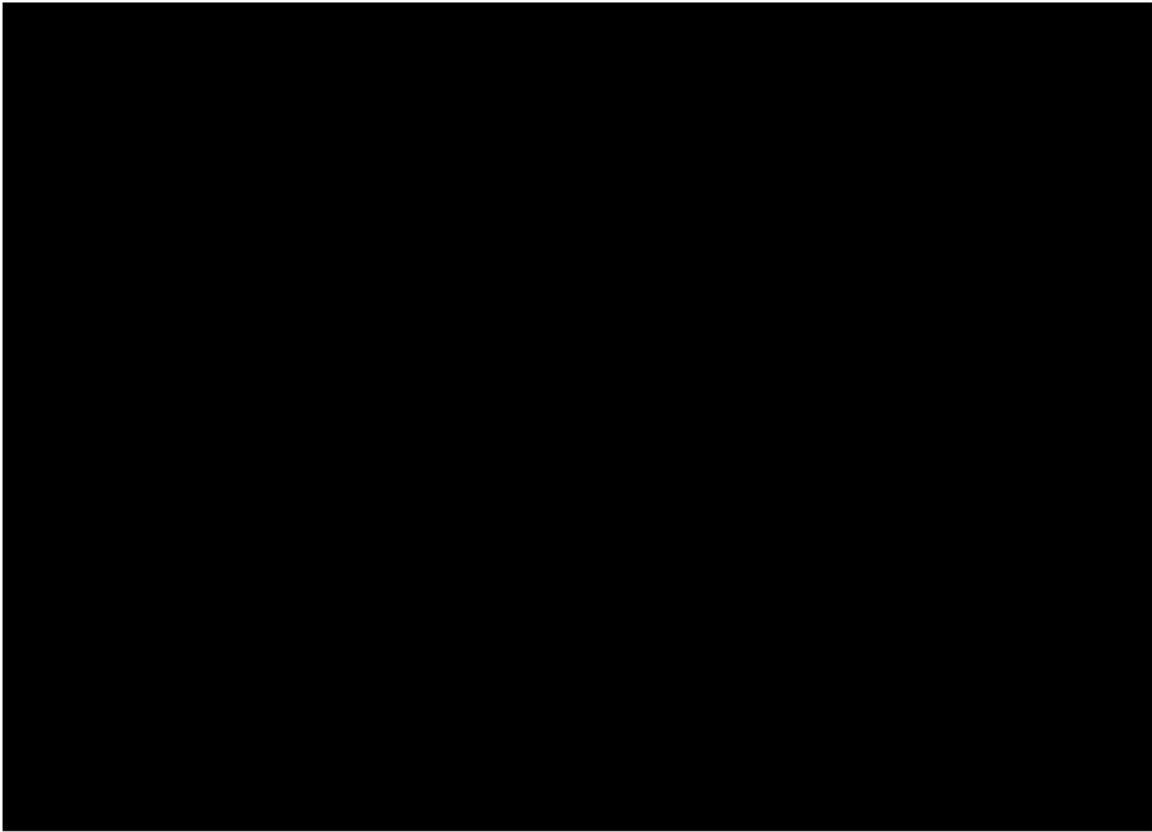
2.3 MEETING WITH SCHOOL REPRESENTATIVES

Consultant staff, the Principal of I.S. 145 and the Assistant Principal met at the school on the afternoon of June 24, 2004. According to the Principal of the school, the problems presented for I.S. 145 are:

- Parking is a problem for faculty members. The residents of the neighborhood have been complaining of the lack of parking due to the faculty and staff taking up the available spaces. The school administration was called to a meeting with the Council Member's office to discuss the issue, and to inquire if any school employees had any place else to park.
- Traffic congestion is usually a problem at both arrival and dismissal.
- The school indicated that adult supervision would be desirable at the crossings on Northern Boulevard at 79th Street and at 80th Street.
- Speeding was cited as a problem in front and back of the school, but is now much better since the speed reducers (humps) were installed.

(See the Appendix for a summary of school concerns.)





2.6 PRIMARY MODE OF TRANSPORT TO AND FROM SCHOOL

The school’s “catchment area” as defined by the Department of Education is shown in Exhibit 2 at the end of this section. The catchment area is roughly bounded by: 25th Avenue, 31st Avenue, and 35th Avenue to the north; 74th Street, 80th Street, and 84th Street to the east; Broadway and Roosevelt Avenue to the south; and Brooklyn-Queens Expressway and 70th Street to the west.

The school representatives stated that the area from which students come is quite large. Students from as far as Manhattan and the Bronx attend the school.

Table 1 presents the mode of travel for I.S. 145 as identified by school representatives.

TABLE 1: MODE OF TRAVEL	STUDENTS (Percentage)
Walk	85%
Driven by car	10%
School bus (private buses hired by parents)	3%
MTA Bus/Subway	2%
Bicycle	0%
TOTAL	100%

2.7 ADDITIONAL STUDENT PEDESTRIAN TRAFFIC GENERATORS

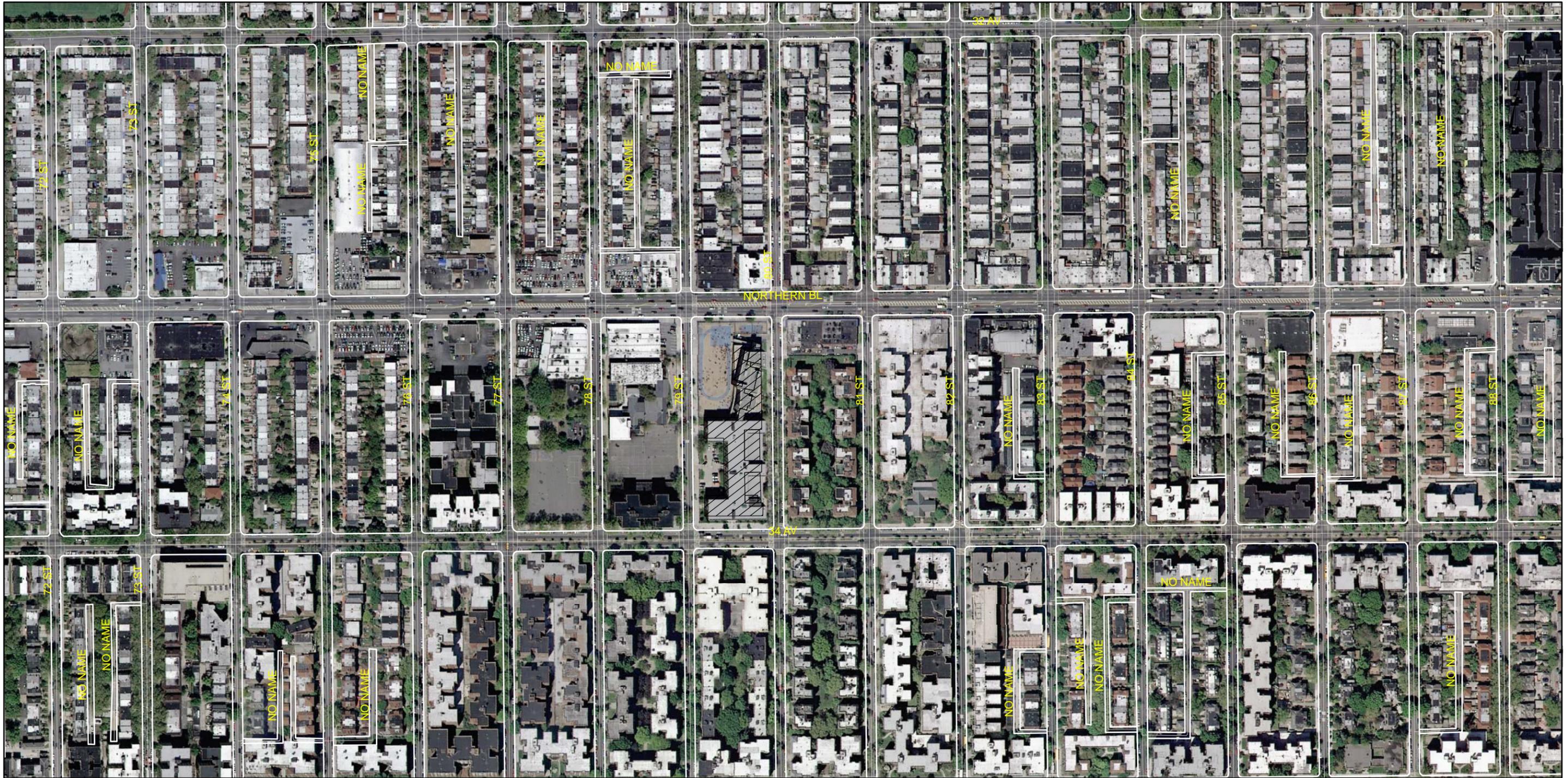
There is a 7-Eleven store on the north side of Northern Boulevard across the street from the school. Additionally, there are many commercial enterprises along Northern Boulevard, including restaurants and delis that are an attraction for I.S. 145 students.



Figure 3: The 7-Eleven store on the north side of Northern Boulevard is an attraction for I.S. 145 student pedestrians

2.8 CROSSING GUARD LOCATIONS

According to the school officials, there are no crossing guards assigned to I.S. 145. The school indicated that adult supervision would be desirable at the crossings on Northern Boulevard at 79th Street and at 80th Street.



0 250 500 1,000
Feet

EXHIBIT 1

I.S. 145 QUEENS

J. PULITZER INTERMEDIATE SCHOOL

AERIAL PHOTOGRAPH

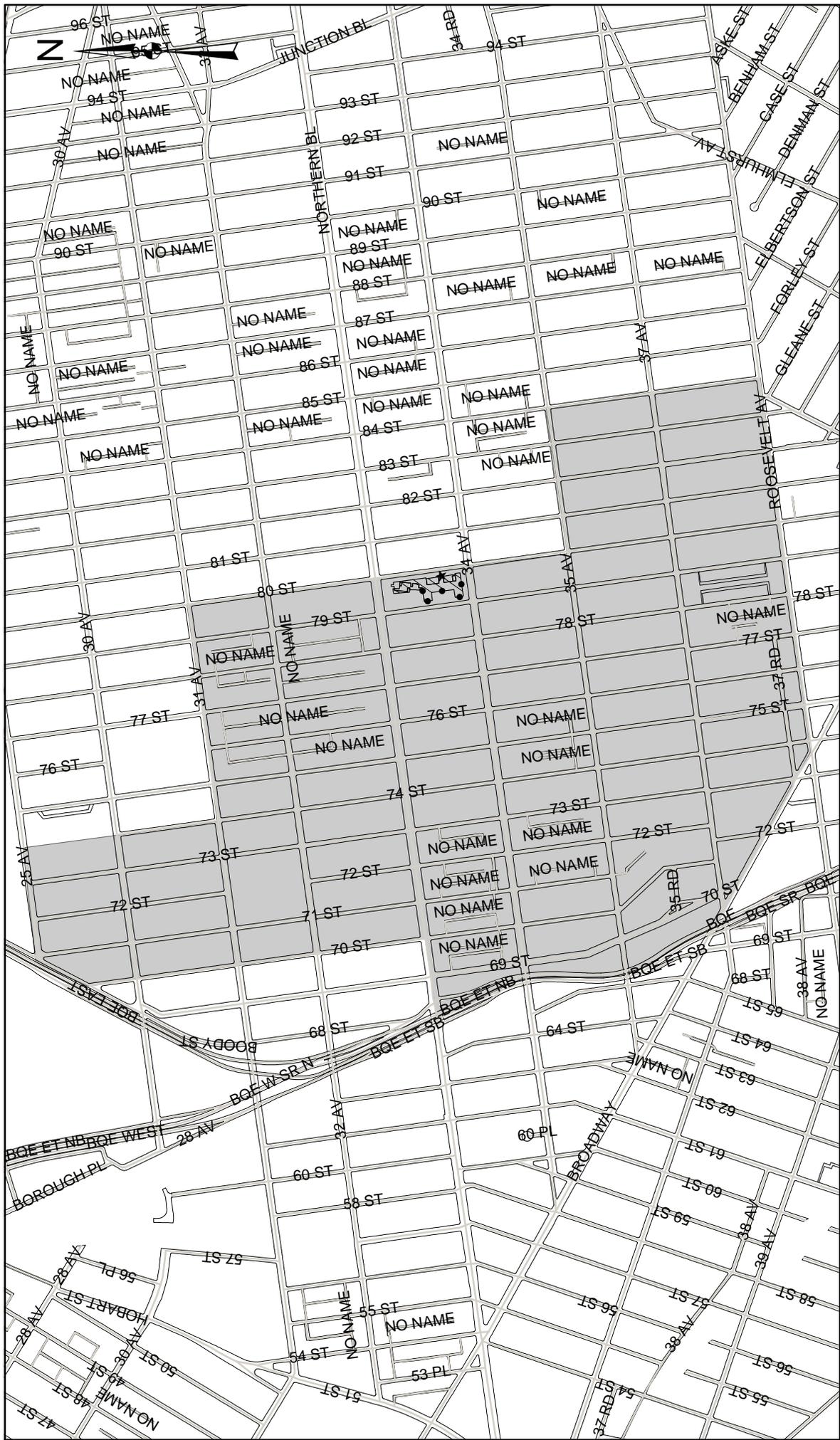


EXHIBIT 2
I.S. 145 QUEENS
J. PULITZER IS
CATCHMENT AREA

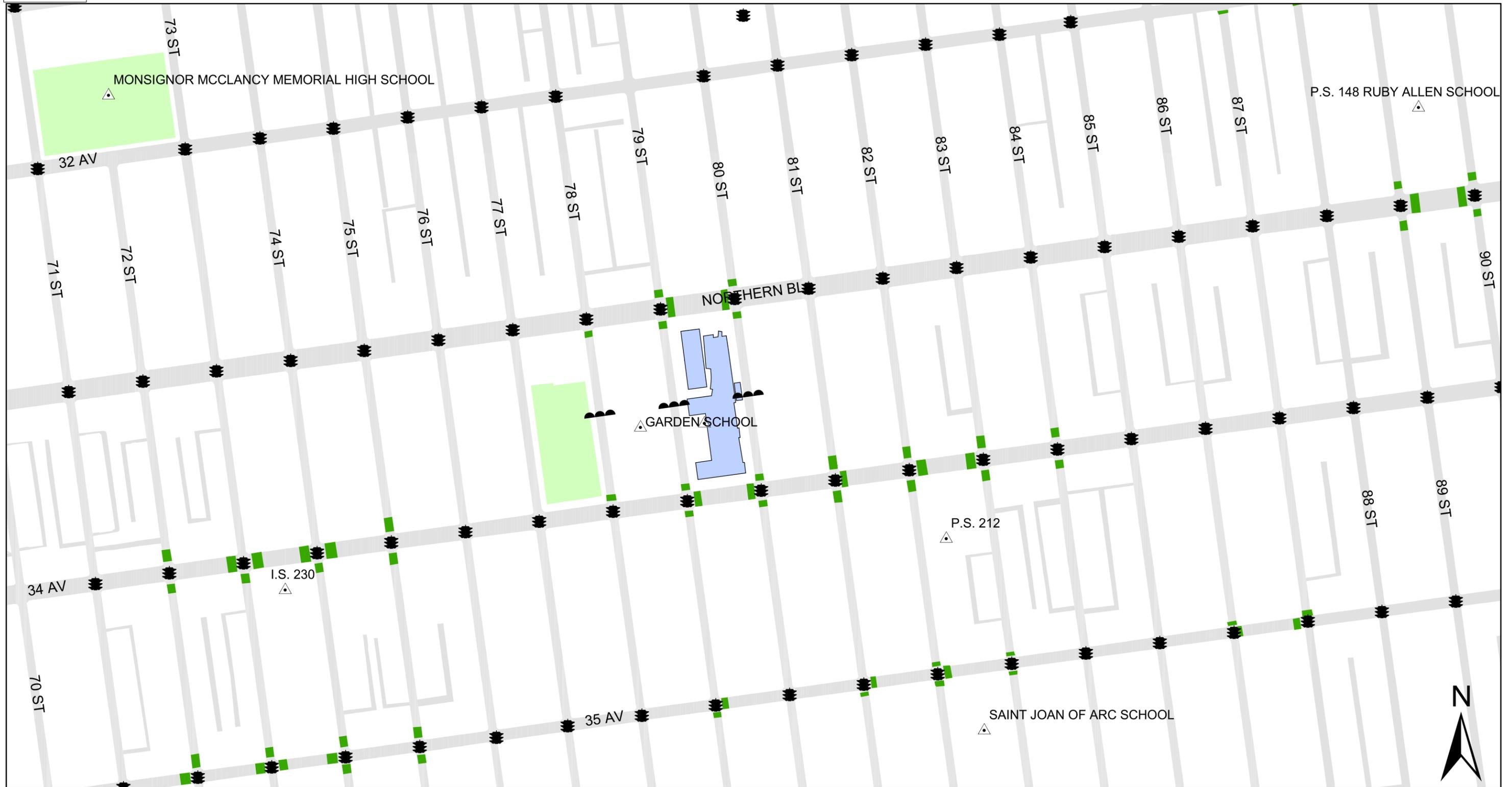


LEGEND:
 CATCHMENT AREA, (DEPARTMENT OF EDUCATION DESIGNATED AREA FROM WITHIN WHICH STUDENTS ARE ENTITLED TO ATTEND I.S. 145)

0 250 500 1,000 Feet



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 145 Queens
J. PULITZER INTERMEDIATE SCHOOL

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

Map created on 11/17/2006

EXHIBIT 3

COMM. BOARD: 403
 PRECINCT: 115

1.5.1

3. TRAFFIC OPERATIONS

3.1 SCHOOL BUS OPERATIONS

According to school representatives, there are approximately forty (40) students who ride an MTA bus to school, and approximately sixty (60) who ride a private yellow school bus to school. Bus transportation for the students consists of approximately ten private yellow buses. There are also two special MTA buses (Q66 and Q19) that stop to pick up students at dismissal.

3.2 PARENT DROP-OFF OPERATIONS

According to school representatives, ten percent (10%) of the students are being dropped off. Congestion typically occurs at times of arrival and dismissal and there is often double parking around the school during arrival and dismissal.

3.3 PARKING REGULATIONS

Parking regulations around the school block are shown in Exhibit 4 at the end of this section. Northern Boulevard is signed as a snow route, with no standing allowed during declared emergencies.

3.4 EXISTING SCHOOL SIGNS AND MARKINGS

Exhibit 3, at the end of Section 2, shows the existing signals, and school signs and pavement markings assigned to I.S. 145. It should be noted that a citywide signage program is currently underway to upgrade school signage to the current edition of the Federal Manual of Uniform Traffic Control Devices (MUTCD) standards of fluorescent yellow-green accompanied by downward pointing arrows. Signs scheduled to be installed under this program are shown as “existing” in Exhibit 8.

3.5 ACCIDENT SUMMARY

The number and severity of accidents at a location are typical indicators used to help determine the existence and severity of any potentially safety-related situations. Such situations are then examined for possible solutions and/or remedies.

Exhibit 5, at end of this section, and Table 2 show a summary of accidents, as obtained from the New York State Department of Motor Vehicles (NYS DMV) in the vicinity of I.S. 145 for a three-year period from January 1, 1998 to December 1, 2000. The NYS DMV data provides some detail relating to the cause of an accident. Table 3 provides a summary of more recent accident data obtained from the New York City Police Department (NYPD). Though current through 2004, the NYPD data does not provide the same level of detail as the NYS DMV data.

Further discussions on accidents are included in Section 3.6, Traffic Operations and Issues.

INTERSECTION	TOTAL ACCIDENTS	PEDESTRIAN ACCIDENTS	PEDESTRIAN FATALITIES	SCHOOL-RELATED ACCIDENTS*
34 th Avenue & 79 th Street	12	0	0	0
34 th Avenue & 80 th Street	13	0	0	0
Northern Blvd. & 79 th Street	42	2	0	1
Northern Blvd. & 80 th Street	38	2	0	0
35 th Avenue & 79 th Street	7	0	0	0
Total	112	4	0	1

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

INTERSECTION	TOTAL ACCIDENTS	PEDESTRIAN ACCIDENTS	PEDESTRIAN FATALITIES	SCHOOL-RELATED ACCIDENTS*
34 th Avenue & 79 th Street	12	0	0	0
34 th Avenue & 80 th Street	20	0	0	0
Northern Blvd. & 79 th Street	54	1	0	0
Northern Blvd. & 80 th Street	65	1	0	0
35 th Avenue & 79 th Street	13	0	0	0
TOTAL	164	2	0	0

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

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. 145.

3.6.1 34th Avenue & 79th Street

This is a signalized intersection with school crosswalks located across the north and south legs of 79th Street and the east leg of 34th Avenue, with a standard pedestrian crosswalk located across the west leg of 34th Avenue. Thirty-Fourth Avenue is a two-way street with one travel lane, a bicycle lane, and a parking lane on each side of the roadway, with a landscaped median along the center of the roadway separating eastbound and westbound traffic. Seventy-Ninth Street is a one-way northbound street with one travel lane and parking on both sides of the roadway. Higher volumes of traffic are experienced on 34th Avenue.

There were twelve (12) accidents reported at this intersection between 1998 and 2000: none of these accidents was a pedestrian accident (Table 2). The NYPD accident data (Table 3) also shows twelve (12) accidents between 2001 and 2004. There were no pedestrian accidents or fatalities reported during the same four-year period.



Figure 4: Looking south on 79th Street at 34th Avenue intersection



Figure 5: Looking east on 34th Avenue at 79th Street intersection

3.6.2 34th Avenue & 80th Street

This is a signalized intersection with school crosswalks located across the north and south legs of 80th Street and the west leg of 34th Avenue, with a pedestrian crosswalk located across the east leg of 34th Avenue. Thirty-Fourth Avenue is a two-way street with one travel lane, a bicycle lane, and a parking lane on each side of the roadway, with a landscaped median along the center of the roadway separating eastbound and westbound traffic. Eightieth Street is a one-way southbound street with one travel lane and parking on both sides of the roadway. Higher volumes of traffic are experienced on 34th Avenue.

This intersection has been the site of thirteen (13) accidents reported at this intersection between 1998 and 2000: none of these accidents was a pedestrian accident (Table 2). The NYPD accident data (Table 3) shows twenty (20) accidents reported at this intersection between 2001 and 2004: none of these accidents was a pedestrian accident.



Figure 6: Looking north on 80th Street at 34th Avenue intersection, school is on far left



Figure 7: Looking west on 34th Avenue at 80th Street intersection

3.6.3 Northern Boulevard & 79th Street

This is a signalized intersection with school crosswalks located across the north and south legs of 79th Street and the east leg of Northern Boulevard. A standard pedestrian crosswalk is located across the west leg of Northern Boulevard. Northern Boulevard is a two-way street with two travel lanes and a parking lane on each side of the roadway, with an approximately ten-foot wide painted center median separating eastbound and westbound traffic. There is a dedicated left turn lane for eastbound Northern Boulevard traffic. Seventy-Ninth Street is a one-way northbound street with one travel lane and parking on both sides of the roadway. Substantially higher volumes of traffic are experienced on Northern Boulevard.

This intersection has been the site of forty-two (42) accidents between 1998 and 2000; two (2) of these were pedestrian accidents, one (1) of which was school-related. In the school-related accident, a twelve-year old pedestrian sustained a “non-incapacitating injury” on Monday, June 8, 1998 at 4:00 p.m. while “crossing against the signal” at the intersection. The road was dry and the weather was clear. There were no pedestrian fatalities during this period. The NYPD accident data (Table 3) shows fifty-four (54) accidents including one pedestrian accident, which was not school-related or a fatality between 2001 and 2004.



Figure 8: Looking west along Northern Boulevard at 79th Street intersection



Figure 9: Looking south along 79th Street at Northern Boulevard intersection, school is on far left

3.6.4 Northern Boulevard & 80th Street

This is a signalized intersection with school crosswalks located across the north and south legs of 80th Street and the west leg of Northern Boulevard. A pedestrian crosswalk is located across the east leg of Northern Boulevard. Northern Boulevard is a two-way street with two travel lanes and a parking lane on each side of the roadway, with an approximately ten-foot wide painted center median separating eastbound and westbound traffic. There is a dedicated left turn lane for westbound Northern Boulevard. 80th Street is a one-way southbound street with one travel lane and parking on both sides of the roadway. Substantially higher volumes of traffic are experienced on Northern Boulevard.

To more fully assess the situation for the area in the neighborhood of I.S. 145, 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 warrant study was completed for the intersection of Northern Boulevard and 80th Street in January 2005 to determine the need for a Leading Pedestrian Interval (LPI) for the intersection. The findings of the study determined the signal was functioning adequately with sufficient time for pedestrians to cross the road and no changes were needed nor implemented at the time.

This intersection was the site of thirty-eight (38) accidents between 1998 and 2000; two (2) of these were pedestrian accidents, neither of which were school-related. There were no pedestrian fatalities during this period. The NYPD accident data (Table 3) shows sixty-five (65) accidents including one (1) pedestrian accident between 2001 and 2004. There were no pedestrian fatalities or school-related accidents during the same four-year period.



Figure 10: Looking east along Northern Boulevard at 80th Street intersection



Figure 11: Looking south along 80th Street at Northern Boulevard intersection, school is on the far right

3.6.5 35th Avenue & 79th Street

This is a signalized intersection with school crosswalks located across the east leg of 35th Avenue and the south leg of 79th Street. 35th Avenue is a two-way street with one travel lane and a parking lane on each side of the roadway. 79th Street is a one-way northbound street with one travel lane and parking on both sides of the roadway. Higher volumes of traffic are experienced on 35th Avenue.

This intersection has been the site of seven (7) accidents between 1998 and 2000; neither of these were pedestrian accidents. The NYPD accident data (Table 3) shows thirteen (13) accidents between 2001 and 2004: none of these were pedestrian accidents.

3.7 SIGNAL TIMING

Pedestrian crossing times were field-verified for crosswalks at signalized intersections in the vicinity of I.S. 145, and were found to be adequate in all directions and approaches based upon a child pedestrian walking at the rate of 3 feet per second. Signal timings are shown in Table 4.

TABLE 4: PEDESTRIAN CROSSING TIME AT SIGNALIZED INTERSECTIONS				
INTERSECTION	CROSSWALK WIDTH (FEET)	PEDESTRIAN TIME ACTUAL (SECONDS)	PEDESTRIAN TIME REQUIRED (SECONDS)	TIMING ADJUSTMENT REQUIRED?
34 th Avenue & 79 th Street				
crossing 34 th Avenue	57	31	22	No
crossing 79 th Street	30	55	13	No
34 th Avenue & 80 th Street				
crossing 34 th Avenue	57	31	22	No
crossing 80 th Street	30	55	13	No
Northern Blvd. & 79 th Street				
crossing Northern Blvd.	71	33	27	No
crossing 79 th Street	33	69	14	No
Northern Blvd. & 80 th Street				
crossing Northern Blvd.	71	31 (am) 31 (am)	27	No
crossing 80 th Street	32	69 (am) 74 (pm)	14	No
35 th Avenue & 79 th Street				
crossing 35 th Avenue	42	33	17	No
crossing 79 th Street	31	79	14	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. 145 are generally in fair condition. Sidewalks are 10 to 15 feet wide on the school block face, and are in fair condition.

3.8.3 Pedestrian Ramps

Overall, pedestrian ramps in the area of the school appear to be standard.

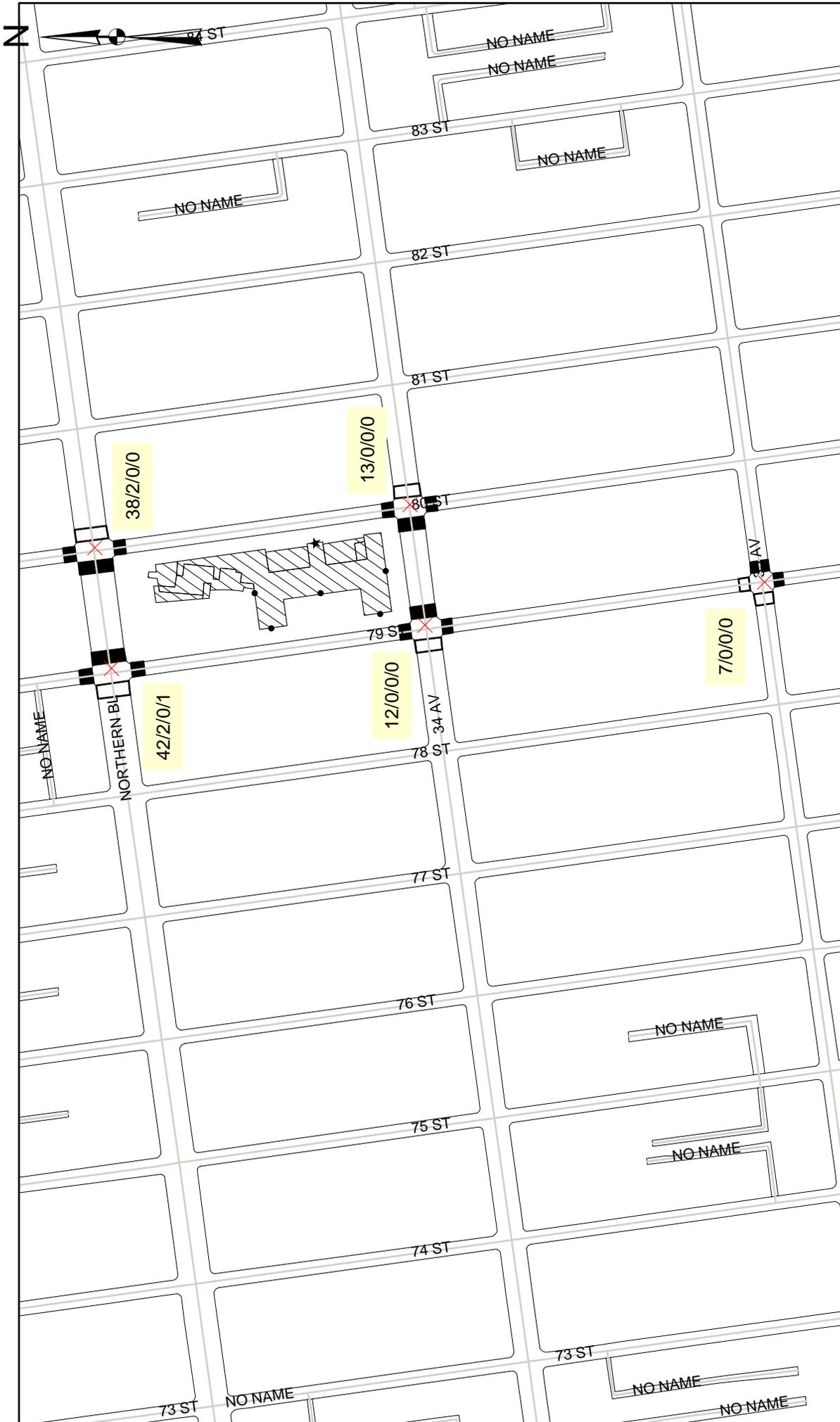


EXHIBIT 5
I.S. 145 QUEENS
J. PULITZER INTERMEDIATE SCHOOL
ACCIDENT SUMMARY (1998-2000)

LEGEND:

- ACCIDENT LOCATION
- SCHOOL CROSSWALK
- SCHOOL CROSSWALK ASSIGNED TO ANOTHER SCHOOL

X / X / X / X
 TOTAL ACCD / PED ACCD / FATAL / SCHOOL_PED ACCD

0 250 500 1,000 Feet

4. PROPOSED MEASURES TO IMPROVE SCHOOL PEDESTRIAN SAFETY

This section describes the proposed measures to improve school pedestrian safety around I.S. 145. 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. 145 is discussed as follows, and is shown in more detail in Exhibit 6 at the end of this section.

4.1 SHORT-TERM MEASURES

➤ *Install “No Standing 7AM - 4PM School Days” signs*

A parking regulation should be instituted and signs installed reading: “No Standing 7AM - 4PM School Days” for thirty feet (30’) in front of the school at the main entrance of the school. (This is a typical requirement for all NYC public schools in order to provide for emergency access to and from the school.). This treatment should also improve traffic operations and reduce congestion on 80th Street.

➤ *Place advanced stop bar before school crosswalk*

The MUTCD and New York City DOT standard for placement of a stop bar is four feet (4’) in advance of a marked crosswalk. At signalized intersections and mid-block crossings, the vehicle stop line can be moved farther back from the pedestrian crosswalk.

For school crosswalks with significant potential for vehicular / pedestrian conflicts, it is recommended that the advance stop bar be placed ten feet (10’) in advance of the crosswalk to maximize the safety benefit for school-aged pedestrians. (This would improve visibility of pedestrians to motorists, and allow pedestrians to proceed in a crosswalk before motor vehicles turn.)

Ten feet (10’) advanced stop bars before school crosswalks are recommended on the following approaches of signalized intersections surrounding I.S. 145:

- Westbound and northbound approaches of 34th Avenue and 79th Street intersection
- Eastbound and southbound approaches of 34th Avenue and 80th Street intersection
- Westbound and northbound approaches of Northern Boulevard and 79th Street intersection
- Eastbound and southbound approaches of Northern Boulevard and 80th Street intersection
- Westbound and northbound approaches of 35th Avenue and 79th Street intersection

➤ Administer student pedestrian safety education program

According to the school officials, there are no crossing guards assigned to I.S. 145. The school indicated that adult supervision would be desirable at the crossings on Northern Boulevard at 79th Street and at 80th Street.

Since both intersections provide pedestrian signals with adequate crossing time and the ages of students in Grades 6 through 8 are between 11 and 14 years, adult supervision is not required. Instead, it is proposed that the NYCDOT Safety Education Program work with the school to educate the students not to cross mid-block and not to cross against signals.

4.2 LONG-TERM MEASURES

➤ Consider refuge islands at the following intersections as shown in Exhibit 6:

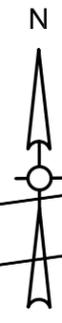
There is a landscaped median along the center of 34th Avenue, separating eastbound and westbound traffic. This median does not extend through the pedestrian crosswalks. The school crosswalks are located at the west leg of 79th Street and at the east leg of 80th Street. It is therefore recommended to:

- Provide a pedestrian refuge island by extending the median through the school crosswalk at the east leg of 34th Avenue/79th Street and at the west leg of 34th Avenue/80th Street, as shown in Exhibit 6.

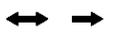
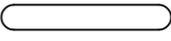
There is a striped median along the center of Northern Boulevard, separating eastbound and westbound traffic. A school crosswalk is located at the east leg of Northern Boulevard at its intersection with 79th Street. It is therefore recommended to:

- Provide a pedestrian raised concrete refuge island at the east leg of Northern Boulevard/79th Street and at the west leg of Northern Boulevard/80th Street, as shown in Exhibit 6.

The refuge islands with extended medians will provide a refuge for pedestrians who do not complete the crossing during the flashing “Don’t Walk” indication. The proposed median should be at least 5-foot wide, should extend beyond the crosswalk, and should have at least 5-feet at grade cut through section. These medians are not proposed where they would hinder the ability of vehicles to turn. Final details pertaining to proposed refuge islands and curb extensions will be developed during Final Design.



LEGEND

-  MAIN ENTRANCE
-  OTHER ENTRANCES
-  EXISTING TRAVEL DIRECTION
-  EXISTING ADVANCE WARNING SIGN
-  EXISTING SCHOOL CROSSWALK WARNING ASSEMBLY
-  SIGNALIZED LOCATION
-  EXISTING PAINTED MEDIAN
-  EXISTING CONCRETE MEDIAN
-  EXISTING BIKE LANE
-  EXISTING SPEED REDUCERS
-  EXISTING SCHOOL CROSSWALK
-  EXISTING PEDESTRIAN CROSSWALK
-  EXISTING SCHOOL CROSSWALK ASSOCIATED WITH ANOTHER SCHOOL
-  PROPOSED ADVANCE WARNING SIGN
-  PROPOSED SCHOOL CROSSWALK WARNING ASSEMBLY
-  PROPOSED STOP LINE IN ADVANCE OF SCHOOL CROSSWALK
-  PROPOSED "NO STANDING 7:00AM - 4:00PM SCHOOL DAYS"
-  PROPOSED CONCRETE REFUGE ISLAND

1" = 200'

EXHIBIT 6

I.S. 145 QUEENS
J. PULITZER INTERMEDIATE SCHOOL

PROPOSED MEASURES
TO IMPROVE SCHOOL PEDESTRIAN SAFETY

APPENDIX

