

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



School Safety Engineering Project

FINAL REPORT: P.S. 53 (Basheer Quisim School), Bronx



**Prepared by
The RBA Group/Urbitran Associates**



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**School Safety Engineering Project
Final Report: P. S. 53, Bronx**

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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). P.S. 53 (Basheer Quisim School) in the Bronx 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. P.S. 53 is bounded by Findlay Avenue on the west and Teller Avenue on the east. The Grand Concourse, a major north-south arterial, is about six blocks to the west of Findlay Avenue. Webster Avenue is the nearest arterial street to the east, two blocks away from Teller Avenue. The Cross Bronx Expressway is about 0.7 miles to the north.

The surrounding neighborhood is mostly residential in character, although there is a storage facility between Findlay Avenue and Teller Avenue, on the north side of East 168th Street, across from the school. This storage facility consists of two one-story buildings, with paved areas around these buildings, apparently being used for some parking across the street from the school.



Figure 1: Looking north along Findlay Avenue across East 168th Street (school is off to the right)

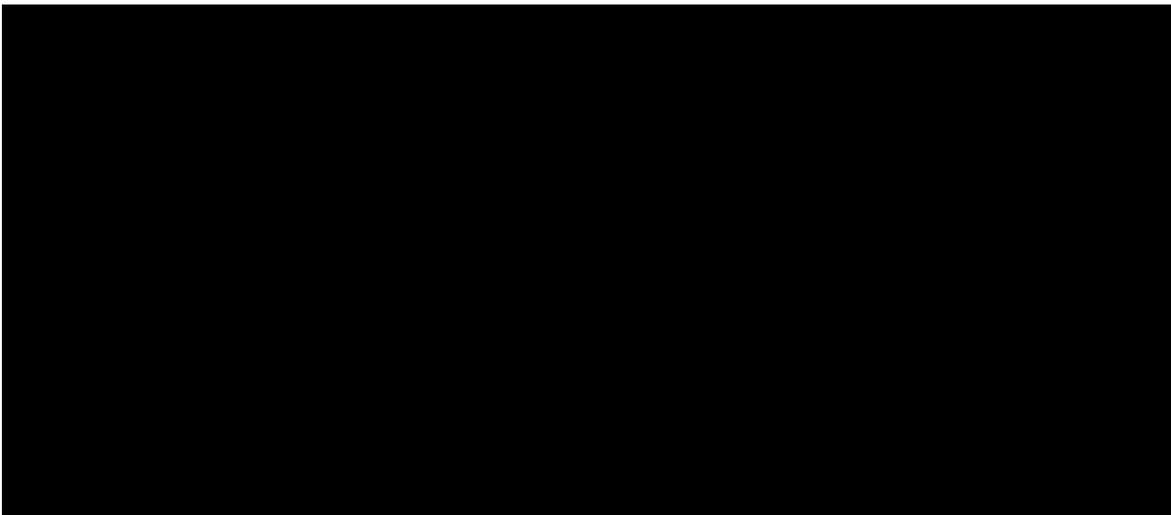
2.3 MEETING WITH SCHOOL REPRESENTATIVES

Consultant staff, the Principal, Assistant Principal and members of the school safety committee of P.S. 53 met at the school on the afternoon of April 2, 2004. According to the school officials, the problems facing P.S. 53 students are as follows:

- The need for more definitive and noticeable school crossing warning devices. At times, the existing signs are blocked from view by trucks making local deliveries (see Figure 2).
- Speeding was reported on both Findlay Avenue and Teller Avenue.
- The school safety committee would like to see an intersection warning beacon or a sign for reduced speed on or approaching both Findlay Avenue and Teller Avenue near 168th Street.
- The school safety committee inquired about the possibility of installing school warning flashers. (School Zone Ahead...).
- The school safety committee inquired about the possibility of installing of speed reducers (humps) to help control speeding on Teller and Findlay avenues.
- Many of their parking regulation signs are vandalized, particularly the “No Parking – 7:00 A.M.- 4:00 P.M. School Days” signs around the school.
- Principal Wolfe related they have concerns in getting the school population to their assigned locations during emergency evacuation procedures, particularly in regard to crossing Teller and Findlay Avenues. The main concern is the particular problem of stopping vehicles traveling on these roadways, and especially the speeding vehicles. It was related that school staff often cannot stop drivers while trying to escort the students across the roadway.
- It was suggested that 25 mph speed limit signs be posted in the area around the school.



Figure 2: Looking south at crosswalk sign blocked by a truck on Findlay Avenue and East 168th Street



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. Based upon information gathered from school officials, the catchment area shown in Exhibit 2 was verified as accurate for P.S. 53.

The school's catchment area, verified by the school representatives is outlined as follows: from Grand Concourse in the west to Teller Avenue in the east, between East 170th Street and East 172nd Street; between East 170th Street and East 169th Street it is bordered by Morris Avenue to the west and Clay Avenue to the east; and with extensions to Grant Avenue and Webster Avenue between East 169th and East 167th Streets.

Table 1 presents the mode of travel for P.S. 53 as identified by school representatives.

TABLE 1: MODE OF TRAVEL	STUDENTS (Percentage)
Walk	85%
Driven by car	0%
School bus	10%
MTA Buses	5%
Subway	0%
Bicycle	0%
TOTAL	100%

2.7 ADDITIONAL STUDENT PEDESTRIAN TRAFFIC GENERATORS

P.S. 53 is located in a generally residential area. There is a parking facility on the east side of Teller Avenue, south of the school; also a storage facility consisting of two one-story buildings with paved areas around these buildings, which is being used for parking across the street from the school, on the north side of East 168th Street.

2.8 CROSSING GUARD LOCATIONS

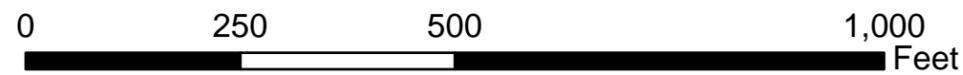
According to school representatives and field observations, there is one crossing guard assigned to P.S. 53 at the intersection of East 168th Street & Findlay Avenue.



Figure 3: Looking southwest across the intersection of East 168th St and Findlay Ave showing crossing guard (school is off to the left)

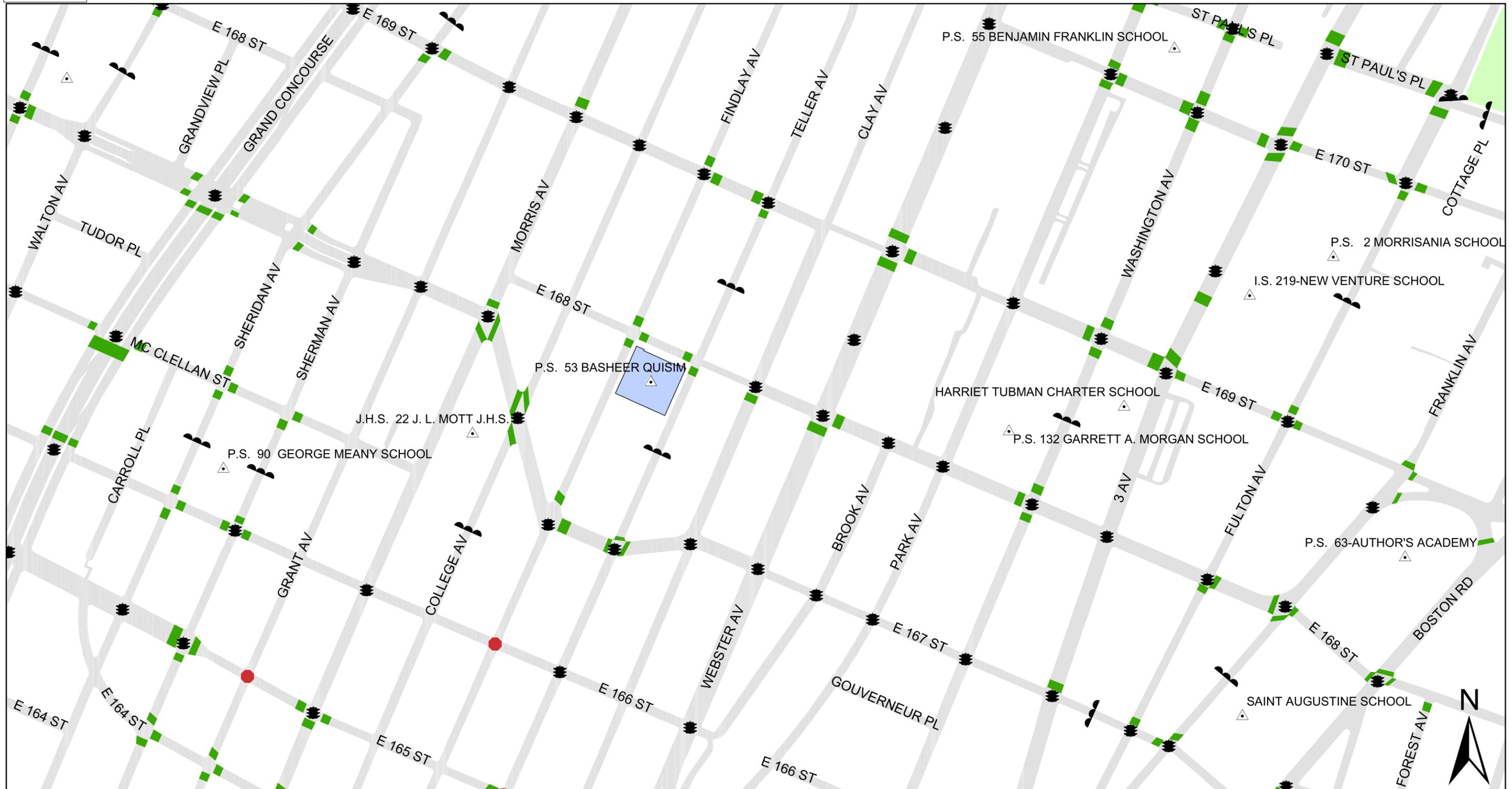


EXHIBIT 1
P.S. 53 BRONX
BASHEER QUISIM
AERIAL PHOTOGRAPH





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 

**PS 53 Bronx
BASHEER QUISIM**

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

Map created on 11/16/2006

EXHIBIT 3

COMM. BOARD: 204
PRECINCT: 44

1.5.1

8



LEGEND:

CROSSING GUARD LOCATION



EXHIBIT 4

P.S. 53 BRONX

BASHEER QUISIM

CROSSING GUARD LOCATION



3. TRAFFIC OPERATIONS

3.1 SCHOOL BUS OPERATIONS

According to school representatives, approximately two hundred thirty (230) students ride a school bus to school, about one hundred fifty-five (155) on school buses and seventy-five (75) on MTA buses. School bus transportation for the students consists of six yellow buses, including two special buses. School bus operations, according to school representatives, are not a special issue at P.S. 53. Consultant observations concur that there is sufficient block face frontage for school bus operations. School buses stop on East 168th Street in the vicinity of the school's front door.



Figure 4: Looking east along East 168th Street at yellow school buses loading students in front of school



Figure 5: East 168th Street is closed officially between Findlay Avenue and Teller Avenue at dismissal time (front of school is to the right)

3.2 PARENT DROP-OFF OPERATIONS

According to school representatives, a very small percentage of students are being dropped off.

3.3 PARKING REGULATIONS

Parking regulations around the school block are shown in Exhibit 5 at the end of this section.

3.4 EXISTING SCHOOL SIGNS AND MARKINGS

Exhibit 3, at the end of Section 2, shows the existing school signs, signals, and pavement markings around P.S. 53. School signs are reported as being often blocked from view by local trucks (see Figure 2). 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 accompanied by downward pointing arrows. This will make the school crossing warning signs more visible to motorists. Signs scheduled to be installed under this program are shown as “existing” in Exhibit 7.

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 6, at the 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 P.S. 53 for a three-year period from January 1, 1998 through December 1, 2000. The DMV data provides some detail relating to the cause of the accident. Table 3 is 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 DMV data. Further discussion on accidents is included in Section 3.6, Traffic Operations and Issues.

In the vicinity of P.S. 53 (within a 700-foot radius around the school), there were one hundred twenty-two (122) accidents reported between 1998 and 2000 including twelve (12) pedestrian accidents (Table 2). There were no pedestrian fatalities and school-related accidents during the same three-year period. The NYPD accident data (Table 3) shows there were two hundred eighty-nine (289) accidents including forty (40) pedestrian accidents in the four-year period between 2001 and 2004. Six (6) of the pedestrian accidents were school-related. There were no pedestrian fatalities.

INTERSECTION	TOTAL ACCIDENTS	PEDESTRIAN ACCIDENTS	PEDESTRIAN FATALITIES	SCHOOL-RELATED ACCIDENTS*
East 168 th St & Findlay Ave	4	1	0	0
East 168 th St & Teller Ave	2	1	0	0
East 168 th St & Webster Ave	37	4	0	0
East 168 th St & Clay Ave	11	1	0	0
East 167 th St & Findlay Ave	11	2	0	0
East 167 th St & Teller Ave	17	1	0	0
East 169 th St & Findlay Ave	12	0	0	0
East 169 th St & Teller Ave	9	0	0	0
East 169 th St & Webster Ave	19	2	0	0
TOTAL	122	12	0	0

INTERSECTION	TOTAL ACCIDENTS	PEDESTRIAN ACCIDENTS	PEDESTRIAN FATALITIES	SCHOOL-RELATED ACCIDENTS*
East 168 th St & Findlay Ave	14	1	0	0
East 168 th St & Teller Ave	11	2	0	2
East 168 th St & Webster Ave	87	13	0	2
East 168 th St & Clay Ave	21	3	0	0
East 167 th St & Findlay Ave	28	6	0	0
East 167 th St & Teller Ave	19	1	0	1
East 169 th St & Findlay Ave	20	3	0	1
East 169 th St & Teller Ave	35	2	0	0
East 169 th St & Webster Ave	54	9	0	0
TOTAL	289	40	0	6

*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 P.S. 53.

3.6.1 East 168th Street and Findlay Avenue

This is a four-leg, two-way stop-controlled intersection with school crosswalks located across the north, south, and east legs. A stop sign exists at the eastbound and westbound approaches of East 168th Street.

East 168th Street is a two-way street with one moving lane and a parking lane on each side of the roadway. East 168th Street runs east-west in this neighborhood, between Morris Avenue in the west and Teller Avenue to the east of the school. Although East 168th Street continues further east of the school, it has only a pedestrian staircase connecting between Teller Avenue and Clay Avenue, the next street to the east.

Findlay Avenue is a one-way southbound street with one travel lane and parking on both sides of the roadway. It runs southbound from East 170th Street in the north to East 164th Street in the south. The school safety committee reported a speeding problem along this street and requested the installation of speed reducers (humps) to help control speeding on Findlay Avenue.

This intersection has been the site of four (4) accidents between 1998 and 2000; one (1) of these was a pedestrian accident. There were no school-related accidents reported. The NYPD accident data (Table 3) shows fourteen (14) accidents with one (1) pedestrian accident, which was not school-related, between 2001 and 2004. No pedestrian fatalities were reported at this intersection during the same four-year (2001-2004) period.

As a result of a report from the school relating a possible speeding problem along Findlay Avenue, a speed survey was conducted on Findlay Avenue between East 168th Street and East 167th Street. Based on the speed survey, the 85th percentile speed for vehicles on Findlay Avenue, south of East 168th Street, was found to be 29 mph.

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

The detailed results of the spot speed survey are shown in the Appendix at the end of the document.



Figure 6: Looking south along Findlay Avenue across East 168th Street (school is on the left)



Figure 7: Looking west along East 168th Street across Findlay Avenue

3.6.2 East 168th Street and Teller Avenue

This is an unsignalized T-intersection with school crosswalks located across the west and south legs. A stop sign exists at the eastbound approach of East 168th Street.

East 168th Street is a two-way street with one moving lane and a parking lane on each side of the roadway.

Teller Avenue is a one-way northbound street with one travel lane and parking on both sides of the roadway. It runs north-south from East 162nd Street in the south to Mt. Eden Parkway in the north. During the field visit, many students were observed crossing mid-block on Teller Avenue both north and south of 168th Street. It was also observed that many vehicles appeared to be traveling at relatively high speeds heading north on Teller Avenue. The school safety committee inquired as to the possibility of installing speed reducer (hump) to help control speeding on Teller Avenue. DOT has installed two speed reducers on Teller Avenue, north and south of E. 168th Street.

This intersection has been the site of two (2) accidents between 1998 and 2000; one (1) of these was a pedestrian accident, which was not a school-related accident. The NYPD accident data (Table 3) shows eleven (11) accidents, including two (2) pedestrian accidents, both of which were school-related accidents, between 2001 and 2004. No additional information about the accidents is available.

As a result of a report from the school relating a possible speeding problem along Teller Avenue, NYCDOT performed an in-house study and a speed reducer (hump) was installed on Teller Avenue just south of East 168th Street.



Figure 8: Looking north along Teller Avenue across East 168th Street, (school is off to the left)



Figure 9: Looking south along Teller Avenue across East 168th Street (school is on the right)



Figure 10: Staircase on east side of Teller Ave connecting East 168th St between Teller and Clay Avenues

3.6.3 East 168th Street and Webster Avenue

This is a four-leg signalized intersection with school crosswalks located across the south and east legs.

East 168th Street is a two-way street with one travel lane and a parking lane on each side of the roadway. East 168th Street runs east-west in this neighborhood, from Clay Avenue in the west to Prospect Avenue to the east. Although East 168th Street continues further west of Clay Avenue, it has only a pedestrian staircase connecting between Clay Avenue and Teller Avenue, the next street to the west.

Webster Avenue is a two-way street with two traffic lanes and a parking lane on each side of the roadway, and dedicated left turn lanes for each direction of travel at the intersection. Away from the intersection, Webster Avenue typically has a striped median along its length, dividing north and southbound traffic. Webster Avenue is a major connector roadway for this area with significant commercial activity and significant traffic volumes.

Although the intersection area is commercial in character, this does not have a significant effect upon the school; it is not in close proximity to the school.

Thirty-seven (37) accidents occurred at this location between 1998 and 2000, four (4) of these were pedestrian accidents. There were no school-related accidents. The NYPD accident data (Table 3) shows eighty-seven (87) accidents at this location, including thirteen (13) pedestrian accidents between 2001 and 2004; two (2) of these were school-related accidents. No additional information about the accidents is available.



Figure 11: Looking south along Webster Avenue across East 168th Street, traffic pole on the right is obstructing access to the crosswalk

3.6.4 East 168th Street and Clay Avenue

This is a signalized T-intersection with school crosswalk located across the south leg. East 168th Street is a two-way street with one travel lane and a parking lane on each side of the roadway. East 168th Street runs east-west in this neighborhood, from Clay Avenue to Prospect Avenue to the east. Although East 168th Street continues further west of Clay Avenue, it has only a pedestrian staircase connecting between Clay Avenue and Teller Avenue, the next street to the west.

Clay Avenue is a two-way street with one travel lane and a parking lane on each side of the roadway. The two streets form a T-intersection, with Clay Avenue comprising the north and south legs, and East 168th Street comprising the east leg.

Eleven (11) accidents occurred at this location between 1998 and 2000, one (1) of these was a pedestrian accident, which was not school-related. The NYPD accident data (Table 3) shows twenty-one (21) accidents at this location, including three (3) pedestrian accidents between 2001 and 2004; none of these were school-related accidents.

3.6.5 East 169th Street and Findlay Avenue

This is a four-leg signalized intersection with school crosswalks located across the north and east legs. East 169th Street is a two-way street with one wide travel lane and a parking lane on each side of the roadway.

Findlay Avenue is a one-way southbound street with one moving lane and parking on both sides of the roadway (for more detail see section 3.6.1).

This intersection has been the site of twelve (12) accidents between 1998 and 2000. None of the accidents involved pedestrians or school children. The NYPD accident data (Table 3) shows twenty (20) accidents at this location including three (3) pedestrian accidents between 2001 and 2004, one (1) of which was a school-related accident.



Figure 12: Looking south along Findlay Avenue across East 169th Street

3.6.6 East 169th Street and Teller Avenue

As of April 2, 2004, the date the school was visited, this intersection was unsignalized with a school crosswalk located across the west leg of East 169th Street. A stop sign existed at the northbound approach of Teller Avenue. A traffic signal was subsequently installed on June 19, 2004 at this location. As part of this signal installation, all the advanced warning signs were installed or upgraded with the exception of the pavement markings.

East 169th Street is a two-way roadway with one travel lane and a parking lane on each side of the roadway. Teller Avenue is a one-way northbound street with one moving lane and parking on both sides of the roadway (see Section 3.6.2 for more detail).

This intersection has been the site of nine (9) accidents between 1998 and 2000, with no pedestrian accidents. The NYPD accident data (Table 3) shows thirty-five (35) accidents at this location including two (2) pedestrian accidents between 2001 and 2004. There were no school-related accidents.

3.6.7 East 169th Street and Webster Avenue

This is a signalized T-intersection with school crosswalks located across the north and east legs.

East 169th Street, which is the east leg, is a one-way westbound roadway with a very wide travel lane and a parking lane on the south side of the roadway. East 169th Street has no lane marking and two lanes were observed to be formed during the field visit.

Webster Avenue is a two-way street with two traffic lanes and a parking lane on each side of the roadway. At this intersection, Webster Avenue has a striped median along its length, dividing north and southbound traffic. Webster Avenue is a major connector roadway for this area with significant commercial activity, and carrying significant traffic volumes.

This intersection has been the site of nineteen (19) accidents between 1998 and 2000, including two (2) pedestrian accidents. The NYPD accident data (Table 3) shows fifty-four (54) accidents at this location including nine (9) pedestrian accidents between 2001 and 2004. There were no school-related accidents.

3.6.8 East 167th Street and Findlay Avenue

This is a four-leg signalized intersection with school crosswalks located across the north and east legs. East 167th Street is a two-way street with one travel lane and a parking lane on each side of the roadway.

Findlay Avenue is a one-way southbound street with one moving lane and parking on both sides of the roadway.

This intersection has been the site of eleven (11) accidents between 1998 and 2000; two (2) of these were pedestrian accidents. None of the accidents were school-related. The NYPD accident data (Table 3) shows twenty-eight (28) accidents at this intersection, six (6) of which were pedestrian accidents between 2001 and 2004. None of the accidents were school-related.

3.7 SIGNAL TIMING: PEDESTRIAN PHASE

Pedestrian crossing times were field-verified for crosswalks at signalized intersections in the vicinity of P.S. 53, and were found to be adequate based upon a child pedestrian walking at a 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?
Webster Ave & East 168 th St				
crossing Webster Ave.	75	53	28	No
crossing East 168 th St	45	63	18	No
East 168 th St & Clay Ave				
crossing East 168 th St	44	35	18	No
crossing Clay Ave	49	23	20	No
East 167 th St & Findlay Ave				
crossing East 167 th St	55	23	22	No
crossing Findlay Ave	35	35	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 P.S. 53 were observed to be in generally good condition. Sidewalks are about 10 to 15 feet wide on the school block face. They are in fair condition.

3.8.2 Pedestrian Ramps

Overall, pedestrian ramps in the area of the school were observed to be standard, except for the following locations:

- Missing pedestrian ramps on the north and south corners of the west leg of East 168th Street at its intersection with Teller Avenue (see Figure 13).
- A utility pole obstruction on the northwest corner of the East 169th Street and Findlay Avenue intersection (see Figure 14).
- A missing pedestrian ramp on the southwest corner of Teller Avenue at its intersection with East 168th Street (see Figure 9).
- A traffic signal pole obstructing the pedestrian ramp on the southwest corner of East 168th Street and Webster Avenue (see Figure 11).



Figure 13: Looking west at missing pedestrian ramps on East 168th Street at Teller Avenue (front of school is on the left)



Figure 14: Looking north at utility pole obstruction on the northeast corner of East 169th St & Findlay Ave

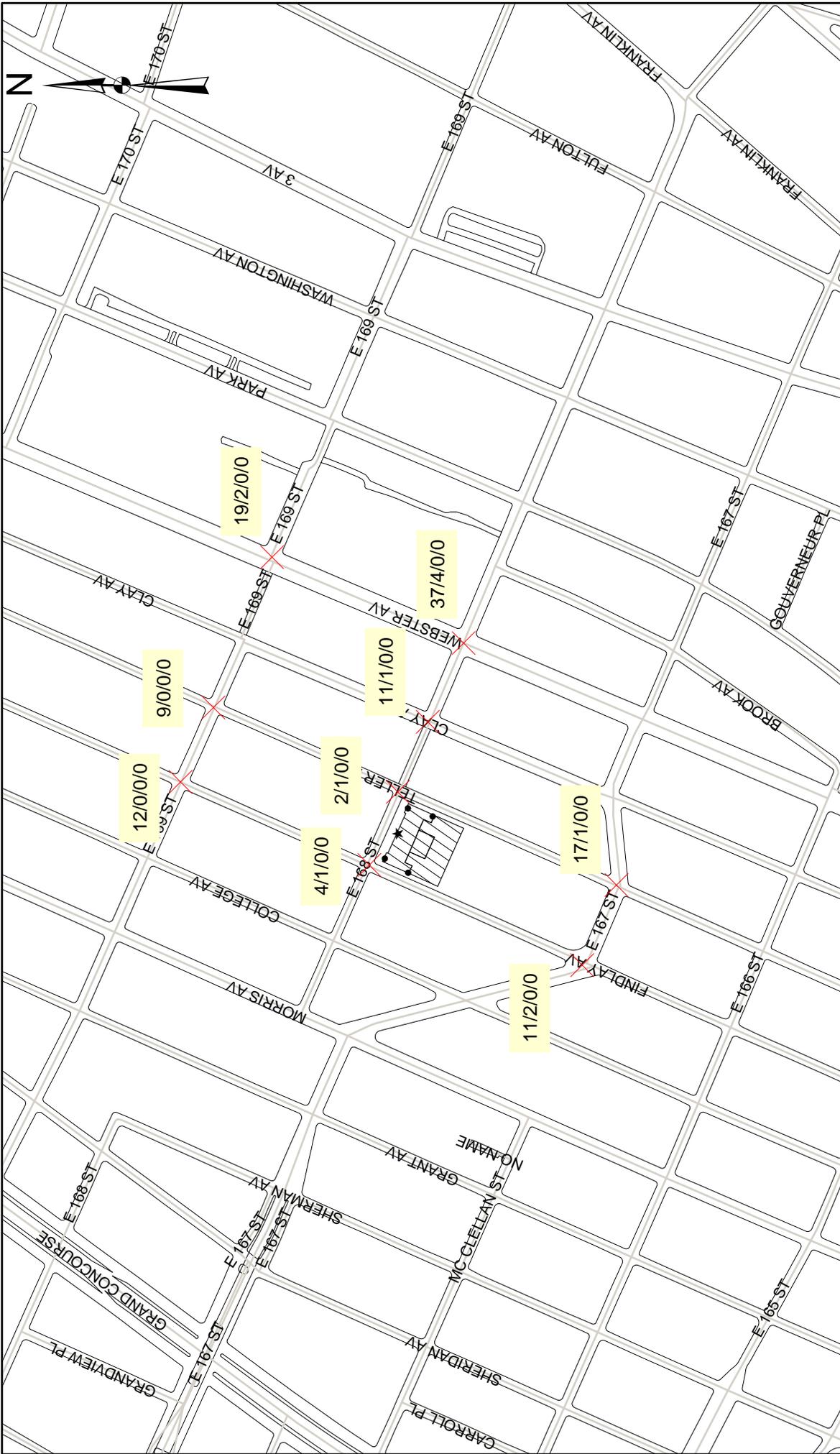


EXHIBIT 6
P.S. 53 BRONX
BASHEER QUISIM
ACCIDENT SUMMARY (1998-2000)

LEGEND:

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

TOTAL ACCD	/	PED ACCD	/	PED FATAL	/	SCHOOL PED ACCD
X/X/X		X/X/X		X/X/X		X/X/X

0 250 500 1,000 Feet

4. PROPOSED MEASURES TO IMPROVE SCHOOL PEDESTRIAN SAFETY

This section describes proposed measures to improve school pedestrian safety around P.S. 53. 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 P.S. 53 is discussed as follows, and is shown in more detail in Exhibit 7 at the end of this section.

4.1 SHORT-TERM MEASURES

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

Install “No Standing 7AM - 4PM School Days” signs for thirty feet (30’) in front of the school at the main entrance of the school.

➤ Additional crossing guard

As mentioned in Section 3.6.2, school children from P.S. 53 often cross East 168th Street and Teller Avenue at the intersection and at mid block locations. There is an uncontrolled school crosswalk at south leg of Teller Avenue. It is therefore recommended to:

- Assign a crossing guard at East 168th Street and Teller Avenue intersection

It should be noted that as a result of a report from the school relating a possible speeding problem along Teller Avenue between 167th and 168th Streets, NYCDOT performed an in-house study and two speed reducers (humps) were installed on Teller Avenue: one just south of East 168th Street, and other one between East 168th Street and 169th Street.

➤ Change existing pedestrian crosswalk to a school crosswalk

Based on field observation and the general layout of the school in relation to the street system, consideration should be given to designating the pedestrian crosswalk across the south leg of the East 169th Street & Webster Avenue intersection as a school crosswalk.

Many students were observed crossing mid-block on Teller Avenue between East 168th Street and East 169th Street. To encourage these students to cross at the intersection, consideration should be given to designating the crosswalk across the south leg of Teller Avenue at its intersection with 169th Street as a school crosswalk.

It is therefore recommended that school crosswalks be designated at the following locations:

- The south leg of the Webster Avenue & East 169th Street intersection
- The south leg of the Teller Avenue & East 169th Street intersection

➤ Provide pedestrian crosswalk at the intersection of East 169th Street and Teller Avenue

As mentioned in Section 3.6.6, a traffic signal was installed on June 19, 2004 at this location. Consequently, all the advanced warning signs were installed or upgraded with the exception of the pavement markings.

It is therefore recommended to:

- Provide pedestrian crosswalks at the north and east legs of the Teller Avenue & East 169th Street intersection

➤ Place advanced stop bars 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 P.S. 53:

- Northbound and westbound approaches of Webster Avenue & East 168th Street intersection.
- Northbound, southbound and westbound approaches of Webster Avenue & East 169th Street intersection.
- Westbound and southbound approaches of East 169th Street & Findlay Avenue intersection.
- Northbound approach of Clay Avenue at its intersection with East 168th Street.

➤ Reconstruct pedestrian ramps

The pedestrian ramps on the north and south corners of the west leg of East 168th Street at its intersection with Teller Avenue are missing (see Figure 13). The following is therefore recommended:

- Install pedestrian ramps on the northwest and southwest corners of East 168th Street and Teller Avenue intersection.

There is a utility pole on the northwest corner of the East 169th Street and Findlay Avenue intersection obstructing the pedestrian ramp (see Figure 14). In addition, there is a traffic signal pole obstructing the pedestrian ramp on the southwest

corner of East 168th Street and Webster Avenue (see Figure 11). The following is therefore recommended:

- Relocate the utility pole and traffic signal poles identified to provide clear pedestrian paths.

4.2 LONG-TERM MEASURES

➤ Consider curb extension at the following intersection:

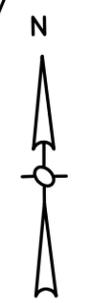
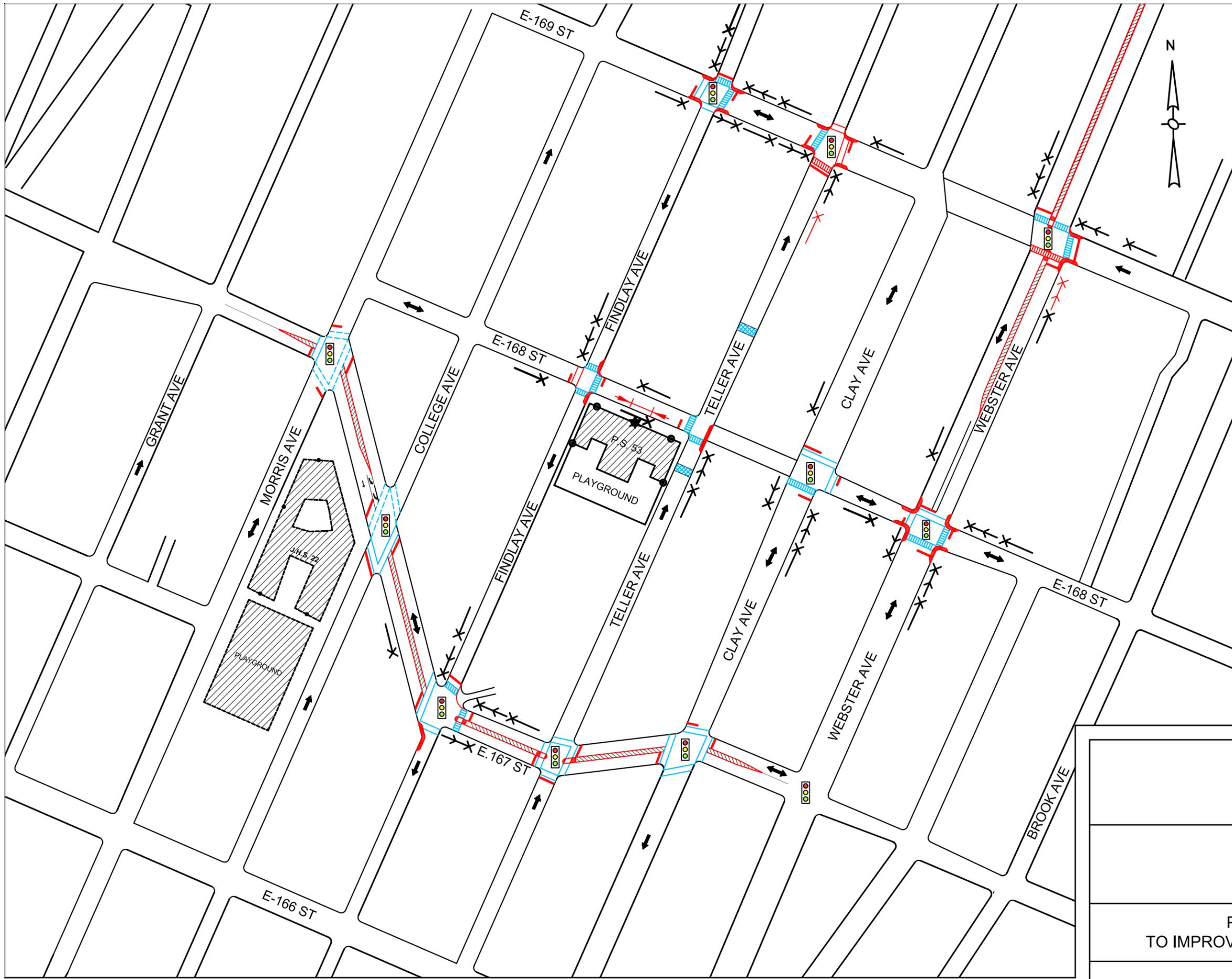
- Provide curb extensions at the northeast and southeast corners of Findlay Avenue at its intersection with East 168th Street.
- Provide curb extensions (neckdowns) at all four corners of East 169th Street at its intersection with Findlay Avenue.
- Provide curb extensions (neckdowns) at all four corners of East 169th Street at its intersection with Teller Avenue.
- Consider extending the east sidewalk of Teller Avenue by six feet in order to reduce the crossing distance at the uncontrolled leg of Teller Avenue at its intersection with East 168th Street.
- Provide curb extensions (neckdowns) at all four corners of Webster Avenue and East 168th Street intersection.
- Provide curb extensions at the northeast and southeast corners of Webster Avenue at its intersection with East 169th Street.
- Provide curb extension at the southwest corner of East 167th Street and Findlay Avenue. The northeast corner of East 167th Street and Findlay, which provides a gated access roadway, needs to be redesigned as shown in Exhibit 7.

Curb extensions (neckdowns) should be installed at the corners as shown in Exhibit 7. The purpose of the curb extensions is to provide additional reservoir space for pedestrian, to shorten the crossing distance for pedestrians, and to reduce the speed of vehicles approaching and turning on school crosswalks. 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.

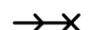
➤ Consider refuge islands and/or striped medians at the following locations as shown in Exhibit 7:

- There is flush striped median at the north and south legs of Webster Avenue at its intersection with East 169th Street. This intersection experienced nine (9) pedestrian accidents during a four-year period between January 2001 and December 2004. In addition to curb extensions at the northeast and southeast corners, it is also recommended to provide pedestrian refuge islands at the north and south legs of Webster Avenue.
- Provide refuge islands at the east leg of East 167th Street at its intersection with Findlay Avenue in conjunction with a flush striped median.
- Provide refuge islands at the east and west legs of East 167th Street at its intersection with Teller Avenue in conjunction with a flush striped median. The concept of a flush striped median should be extended with possible left-turn pocket between Morris Avenue and Webster Avenue.

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 the same width as the existing striped median, 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, curb extensions, and striped medians 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 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 SCHOOL CROSSWALK
-  PROPOSED SCHOOL CROSSWALK
-  PROPOSED STRIPED MEDIAN
-  PROPOSED STOP LINE IN ADVANCE OF SCHOOL CROSSWALK
-  PROPOSED "NO STANDING 7:00AM - 4:00PM SCHOOL DAYS"
-  PROPOSED CURB EXTENSION (NECKDOWN)
-  PROPOSED CONCRETE REFUGE ISLAND

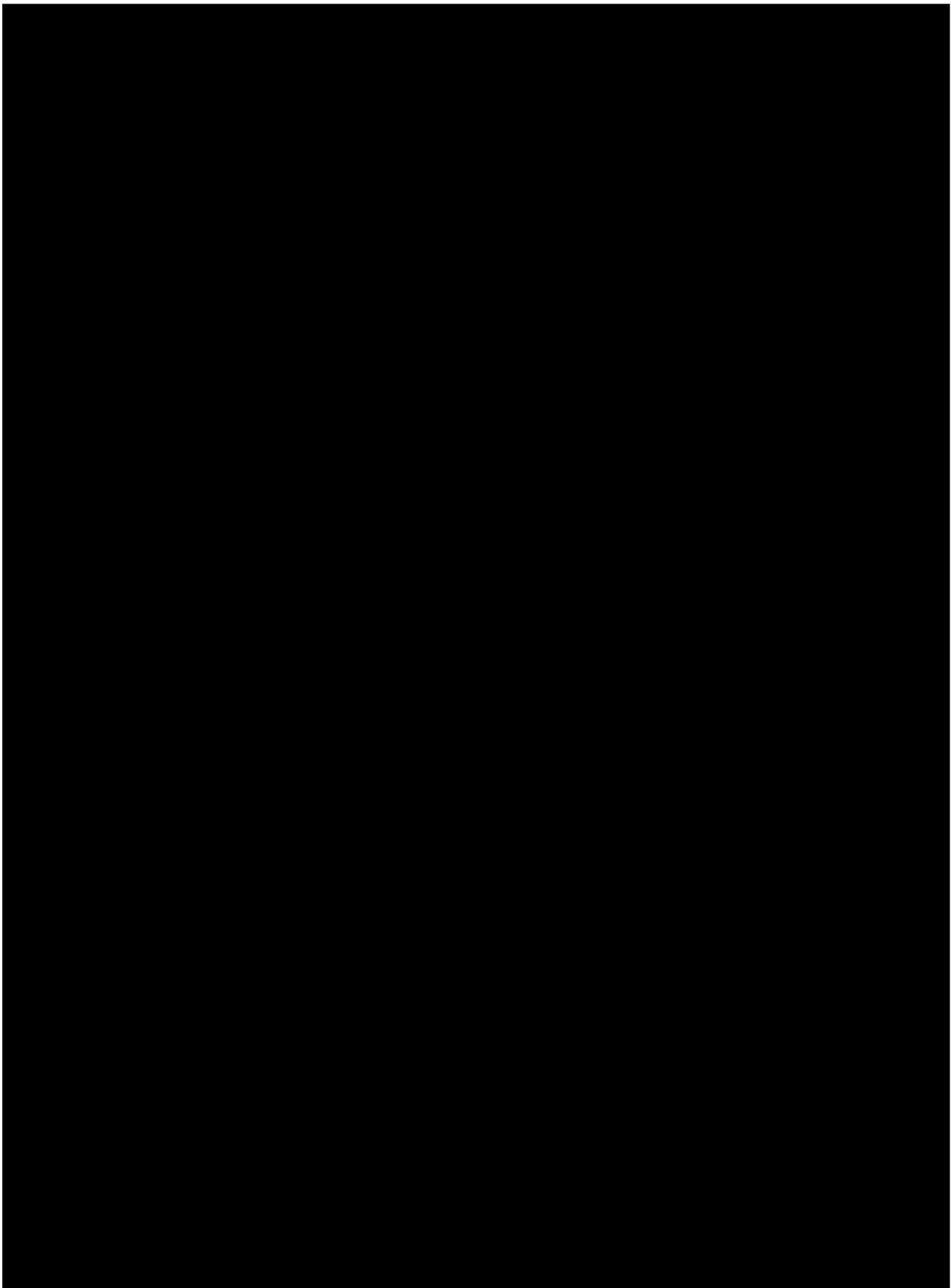
1" = 200'

EXHIBIT 7

P.S. 53 BRONX
BASHEER QUISIM

PROPOSED MEASURES
TO IMPROVE SCHOOL PEDESTRIAN SAFETY

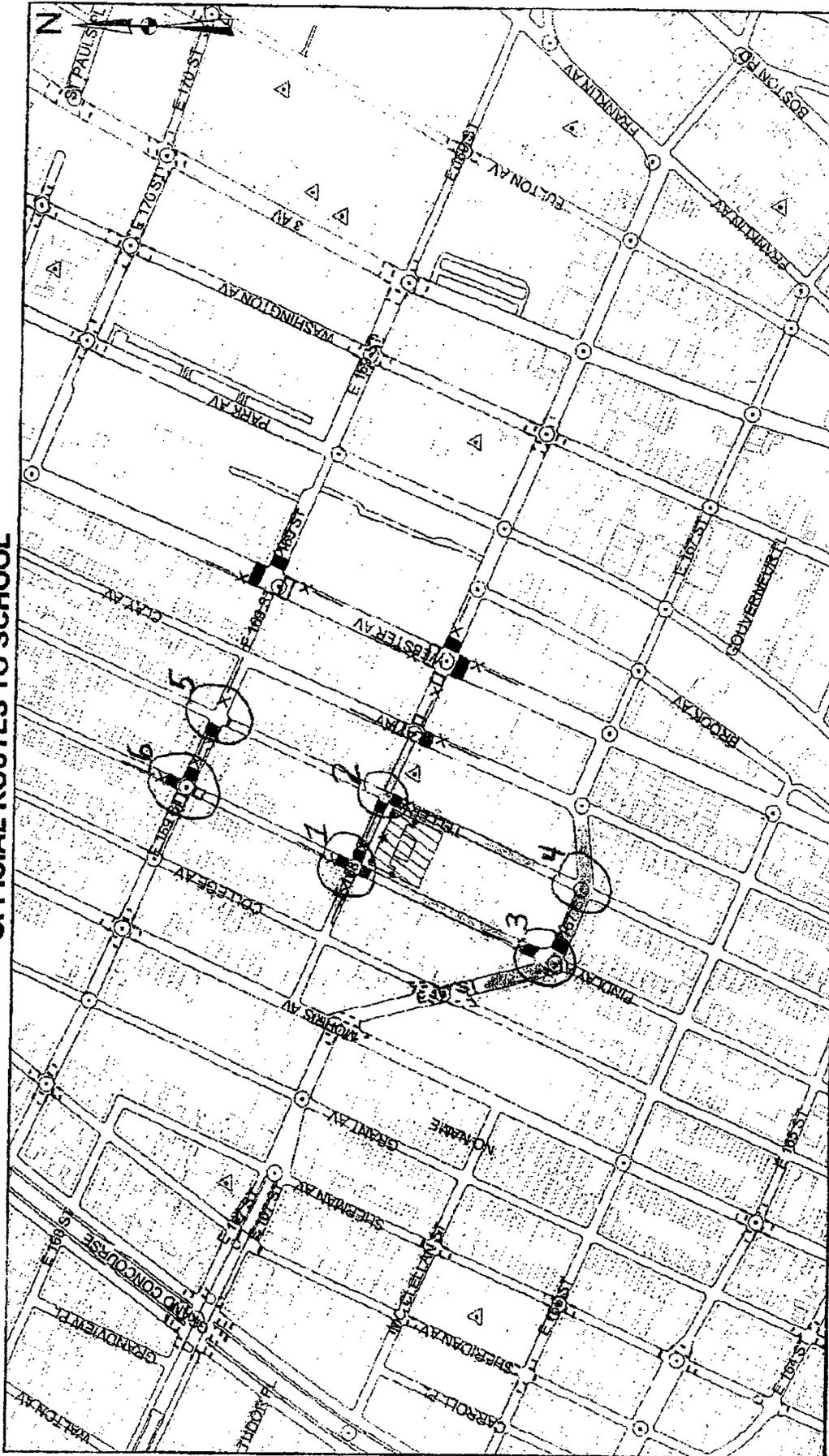
APPENDIX



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 maximum degree 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
 - MAIN SCHOOL ENTRANCE
 - OTHER SCHOOL ENTRANCES

- SCHOOL X-WALK
- PEDE. X-WALK
- STOP LINE
- X-WALKS ASSOCIATED WITH OTHER SCHOOLS
- SPEED HUMP

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

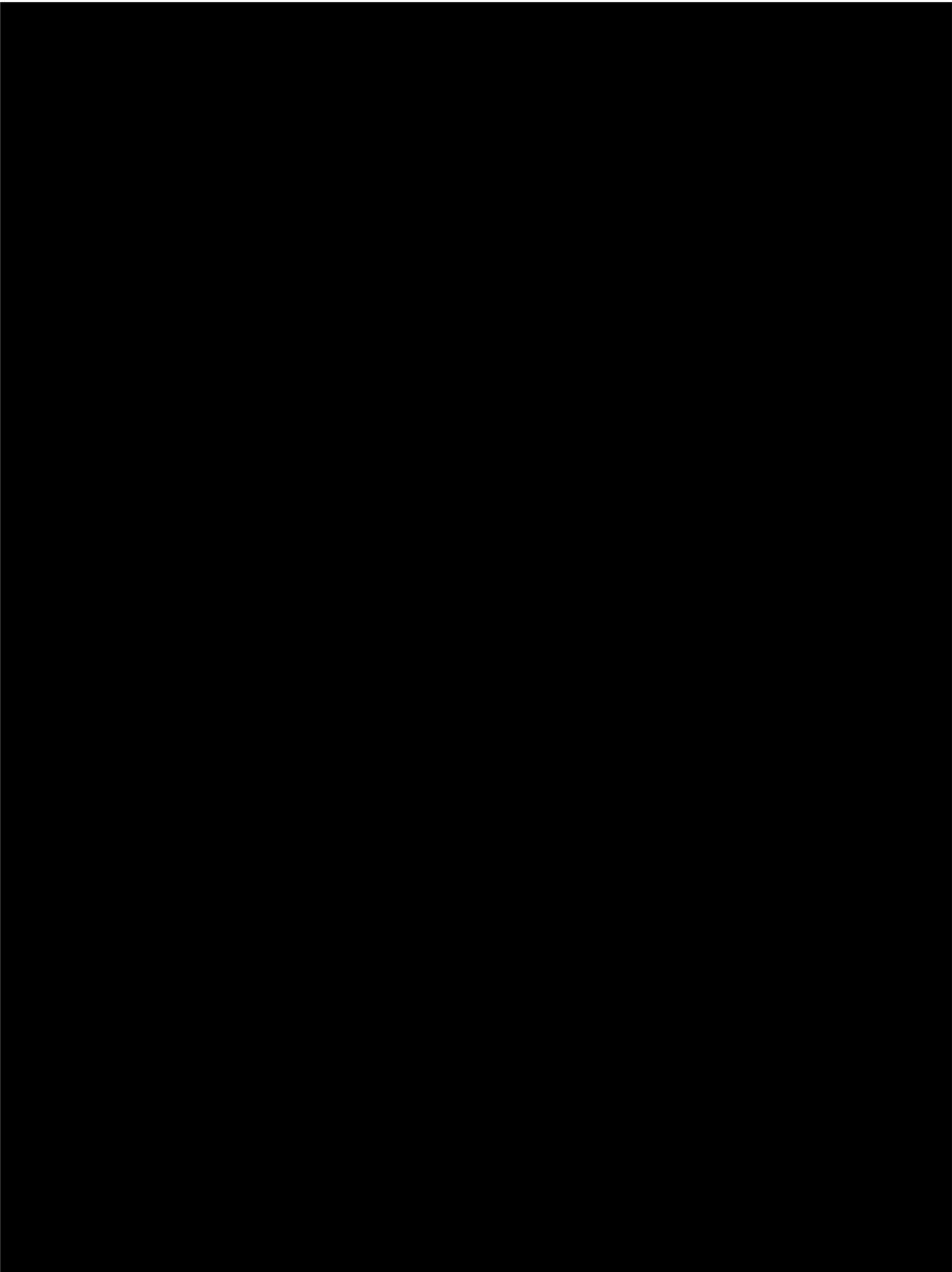
BASHEER QUISIM
P.S. 53

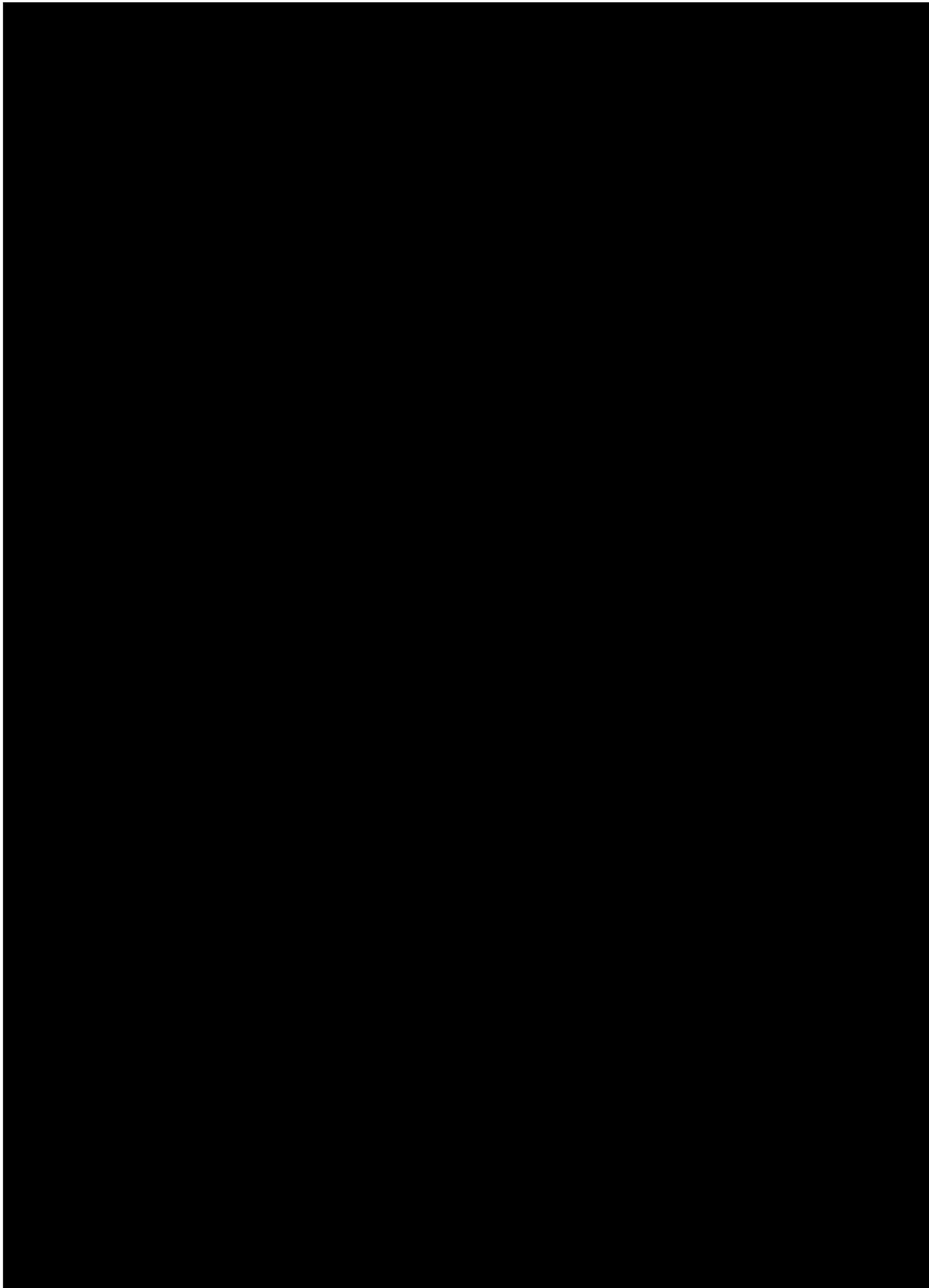
Prepared by the NEW YORK CITY DEPARTMENT OF TRANSPORTATION,
His. Weintraub, COMMISSIONER, in cooperation with SCHOOL. and
POLICE OFFICIALS

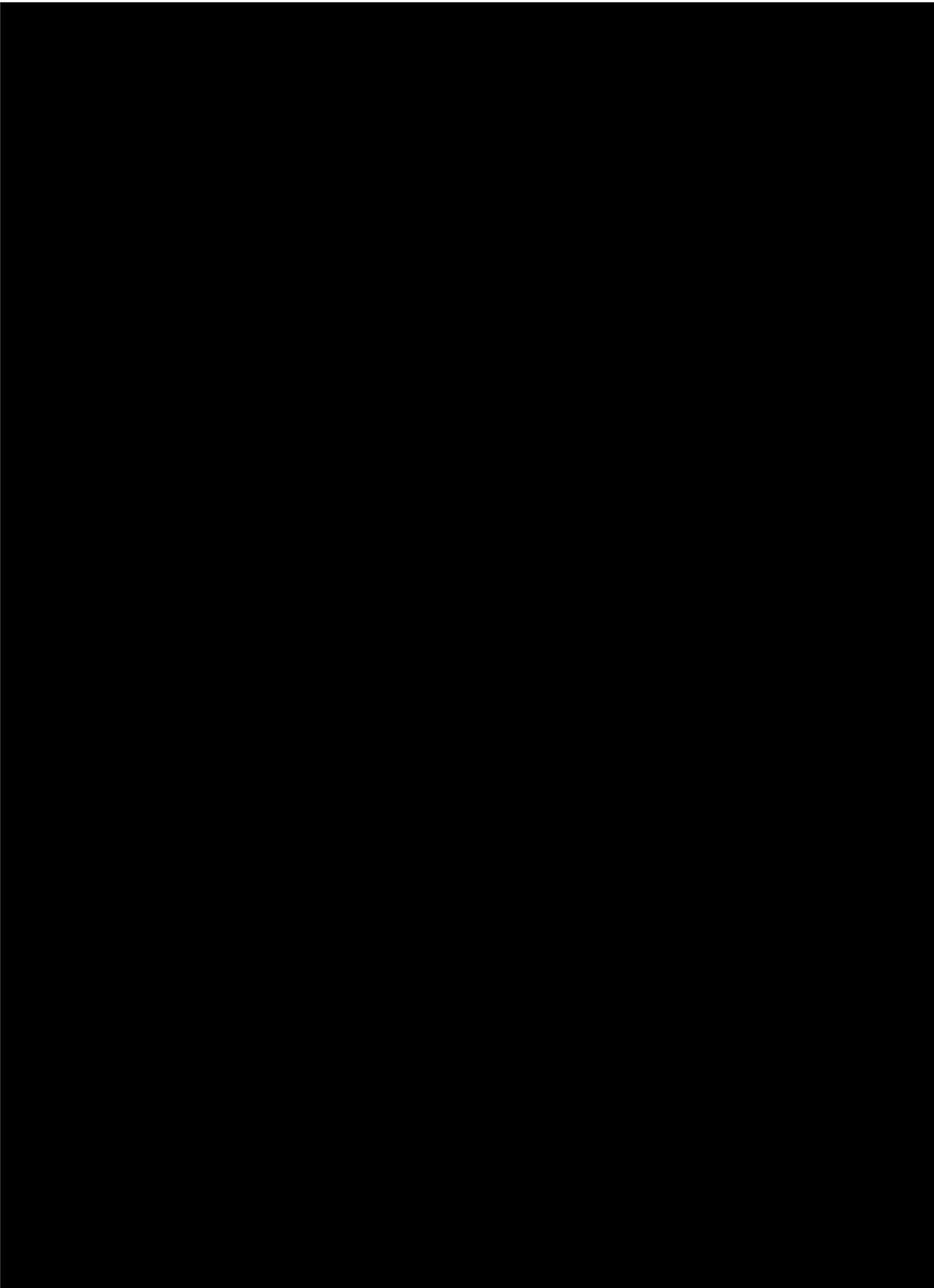
ORIG. DATE: 5/24/87
GIS CONVY: 04/20/02

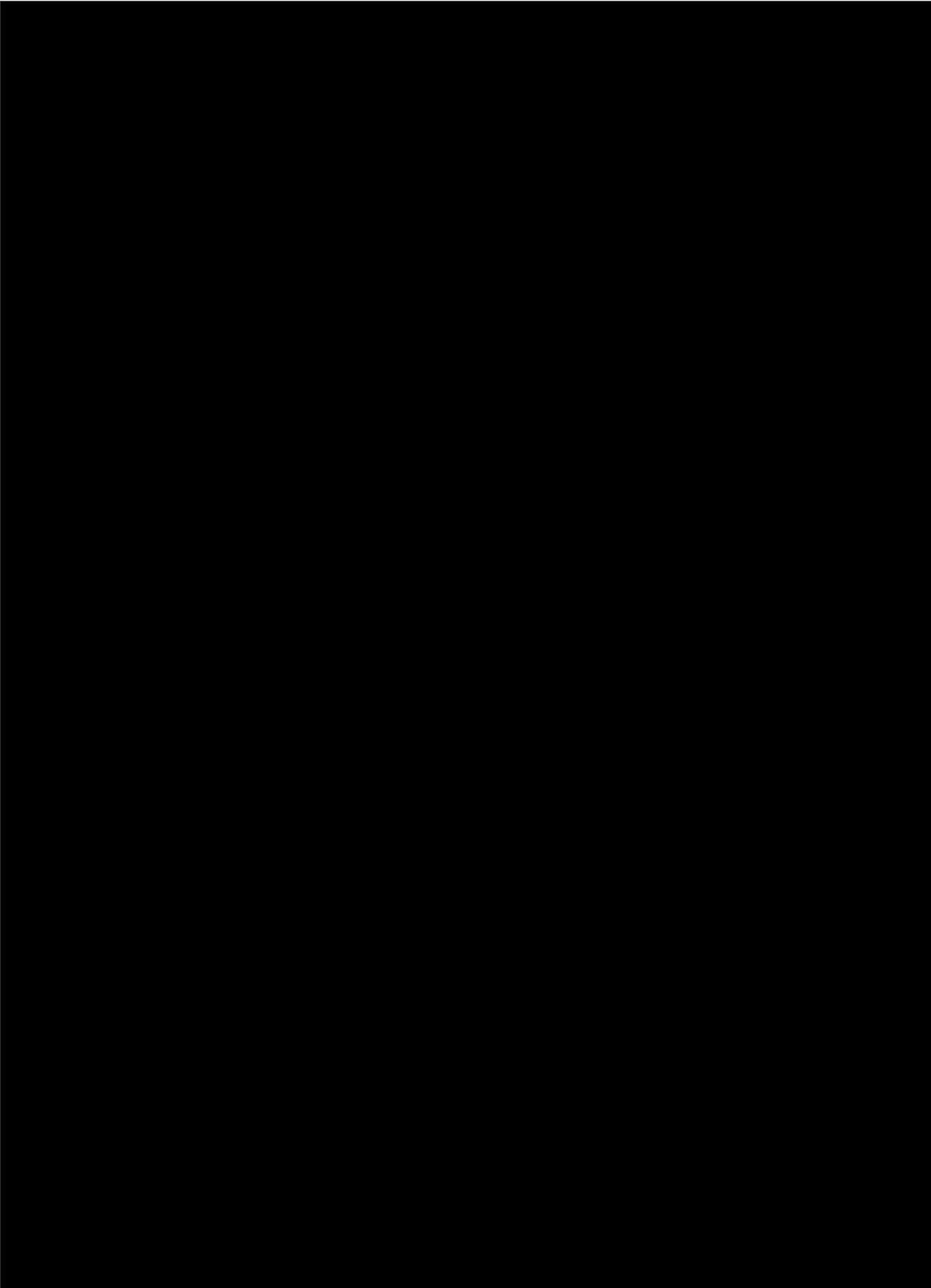
DRAWING NO. _____
CC. 18 _____
MS- 572 _____

COMM. BOARD: _____
BOROUGH: _____
PRECINCT: _____









SPOT SPEED STUDY

Date: **06/02/05** Time: **12:20 PM**
 Location: **Findlay Ave between East 167 St and East 168 St**
 Surveyor: **Richard Calvache**

School: **P.S. 53**
 Direction: **SB**
 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	3.8%	3.8%	57	1083
20	10	12.7%	16.5%	200	4000
21	7	8.9%	25.3%	147	3087
22	6	7.6%	32.9%	132	2904
23	13	16.5%	49.4%	299	6877
24	4	5.1%	54.4%	96	2304
25	8	10.1%	64.6%	200	5000
26	4	5.1%	69.6%	104	2704
27	6	7.6%	77.2%	162	4374
28	5	6.3%	83.5%	140	3920
29	3	3.8%	87.3%	87	2523
30	2	2.5%	89.9%	60	1800
31	3	3.8%	93.7%	93	2883
32	2	2.5%	96.2%	64	2048
33	0	0.0%	96.2%	0	0
34	1	1.3%	97.5%	34	1156
35	0	0.0%	97.5%	0	0
36	1	1.3%	98.7%	36	1296
37	0	0.0%	98.7%	0	0
38	1	1.3%	100.0%	38	1444
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
	79	100.0%		1949	49403

Mean Speed = 24.7 mph
 Standard Deviation = 4.1 mph
 Margin of Error (95% Confidence) = ± 0.9 mph

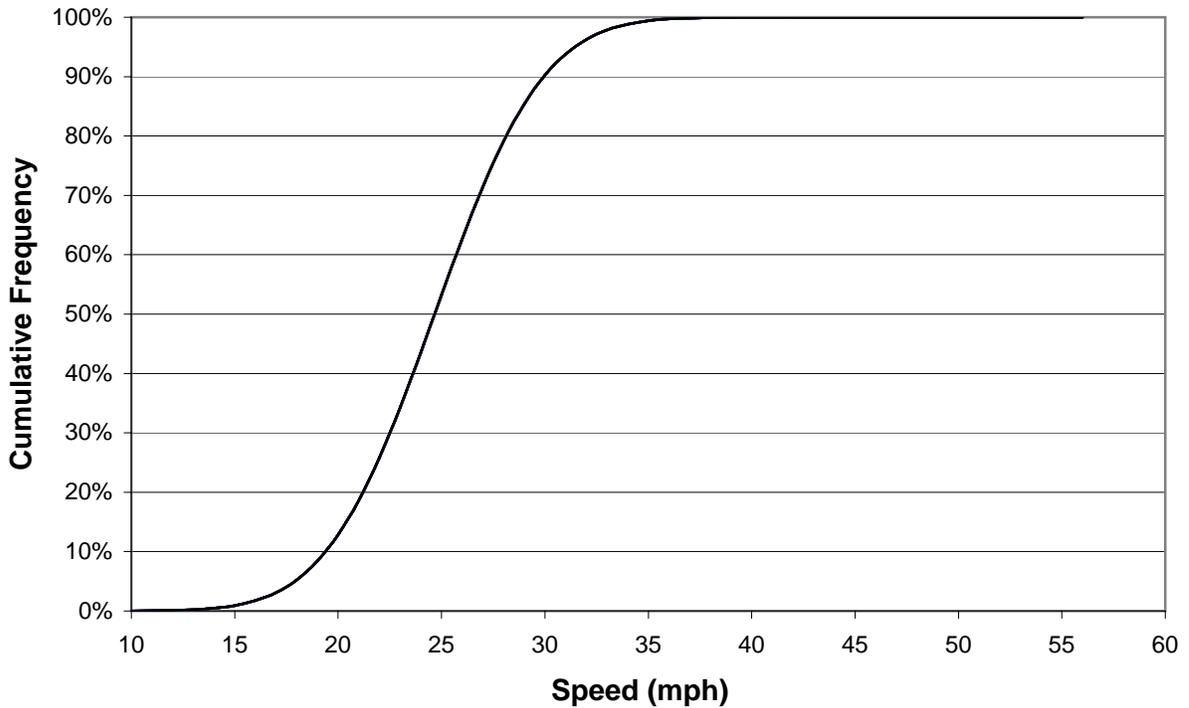
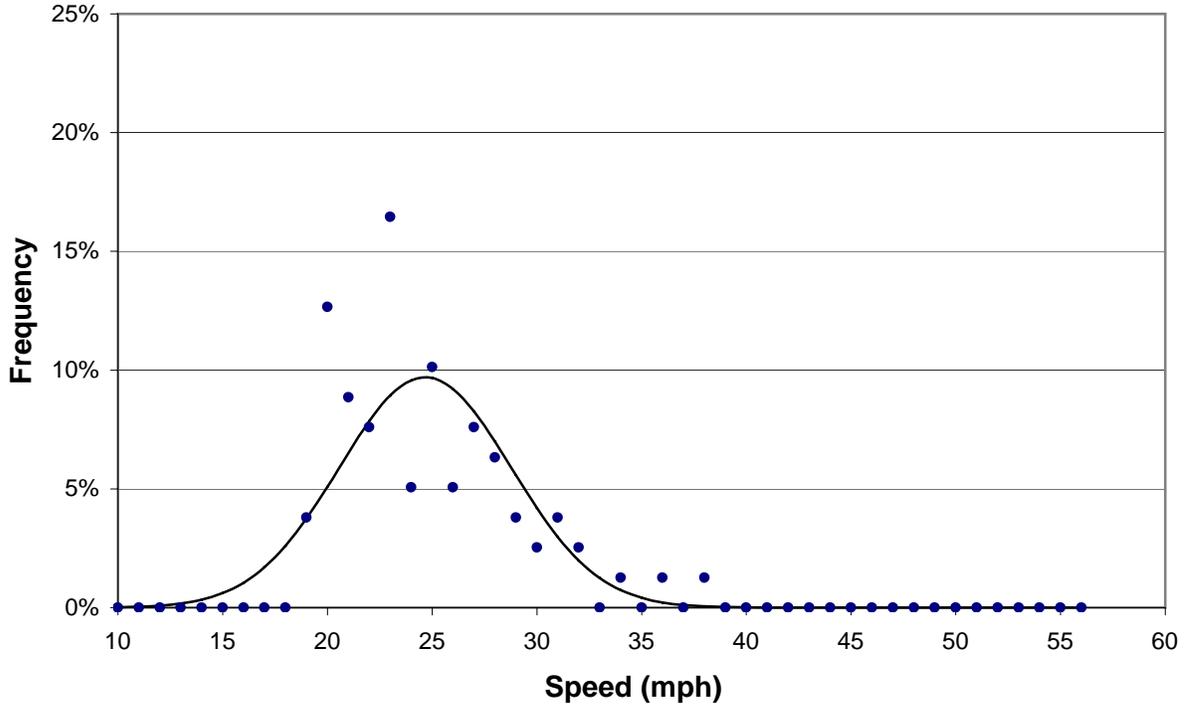
Median Speed = 24.7 mph
 15th Percentile Speed = 20.4 mph
 85th Percentile Speed = 28.9 mph

SPOT SPEED STUDY

Date: **06/02/05** Time: **12:20 PM**
 Location: **Findlay Ave between East 167 St and East 168 St**
 Surveyor: **Richard Calvache**

School: **P.S. 53**
 Direction: **SB**
 Comments:

Mean Speed = 24.7 mph	Median Speed = 24.7 mph
Standard Deviation = 4.1 mph	15th Percentile Speed = 20.4 mph
Margin of Error (95% Confidence) = ± 0.9 mph	85th Percentile Speed = 28.9 mph



SPOT SPEED STUDY

Date: **06/02/05** Time: **11:15**
 Location: **Teller Ave between East 167 St & East 168 St**
 Surveyor: **Richard Calvache**

School: **P.S. 53**
 Direction: **NB**
 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	1	1.7%	1.7%	16	256
17	3	5.2%	6.9%	51	867
18	5	8.6%	15.5%	90	1620
19	1	1.7%	17.2%	19	361
20	8	13.8%	31.0%	160	3200
21	5	8.6%	39.7%	105	2205
22	6	10.3%	50.0%	132	2904
23	6	10.3%	60.3%	138	3174
24	4	6.9%	67.2%	96	2304
25	8	13.8%	81.0%	200	5000
26	3	5.2%	86.2%	78	2028
27	0	0.0%	86.2%	0	0
28	1	1.7%	87.9%	28	784
29	3	5.2%	93.1%	87	2523
30	2	3.4%	96.6%	60	1800
31	0	0.0%	96.6%	0	0
32	0	0.0%	96.6%	0	0
33	1	1.7%	98.3%	33	1089
34	0	0.0%	98.3%	0	0
35	0	0.0%	98.3%	0	0
36	1	1.7%	100.0%	36	1296
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
	58	100.0%		1329	31411

Mean Speed = 22.9 mph
 Standard Deviation = 4.1 mph
 Margin of Error (95% Confidence) = ± 1.1 mph

Median Speed = 22.9 mph
 15th Percentile Speed = 18.7 mph
 85th Percentile Speed = 27.2 mph

SPOT SPEED STUDY

Date: **06/02/05** Time: **11:15**
 Location: **Teller Ave between East 167 St & East 168 St**
 Surveyor: **Richard Calvache**

School: **P.S. 53**
 Direction: **NB**
 Comments:

Mean Speed = 22.9 mph Median Speed = 22.9 mph
 Standard Deviation = 4.1 mph 15th Percentile Speed = 18.7 mph
 Margin of Error (95% Confidence) = ± 1.1 mph 85th Percentile Speed = 27.2 mph

