

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



School Safety Engineering Project

FINAL REPORT: St. Stanislaus Kostka, Queens



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



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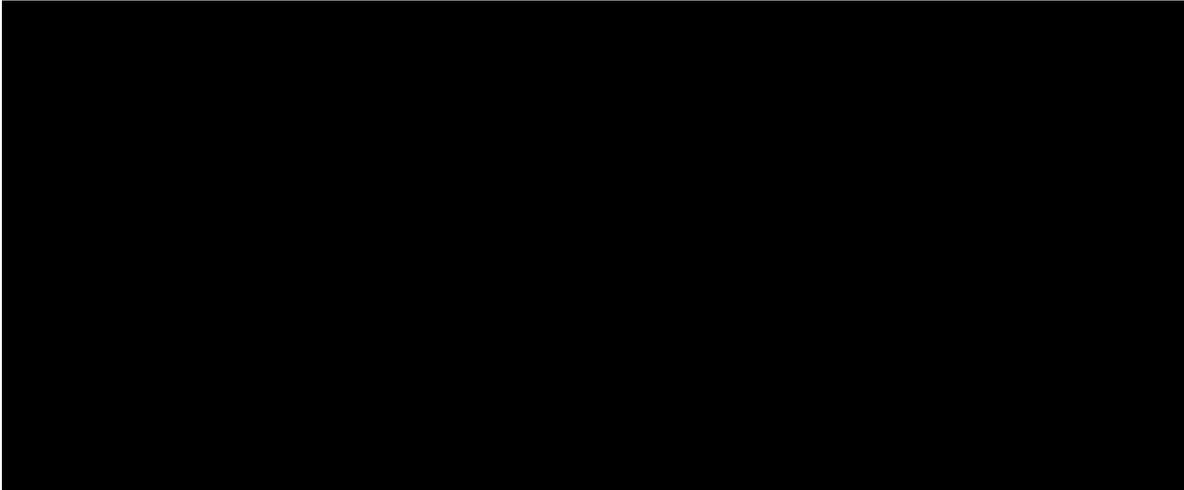
1. INTRODUCTION

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). St. Stanislaus Kostka 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 shows an aerial view of the neighborhood surrounding the school. St. Stanislaus Kostka is bounded by Maspeth Avenue to the north, Grand Avenue to the south, 61st Street to the west, and the intersection of Maspeth Avenue/Grand Avenue/64th Street to the east. The neighborhood surrounding the school consists mostly of one-family and two-family residences, although commercial land uses are located along Grand Avenue, east of the school.

2.3 MEETING WITH SCHOOL REPRESENTATIVES

Members of the consultant team met with several school representatives—including the school principal, two home school association members (the president and the secretary), two parents, and a representative from Community Board No. 5—at the school in the afternoon of Wednesday, June 2, 2004. According to school representatives, students at St. Stanislaus Kostka experience the following traffic- and pedestrian-related problems:

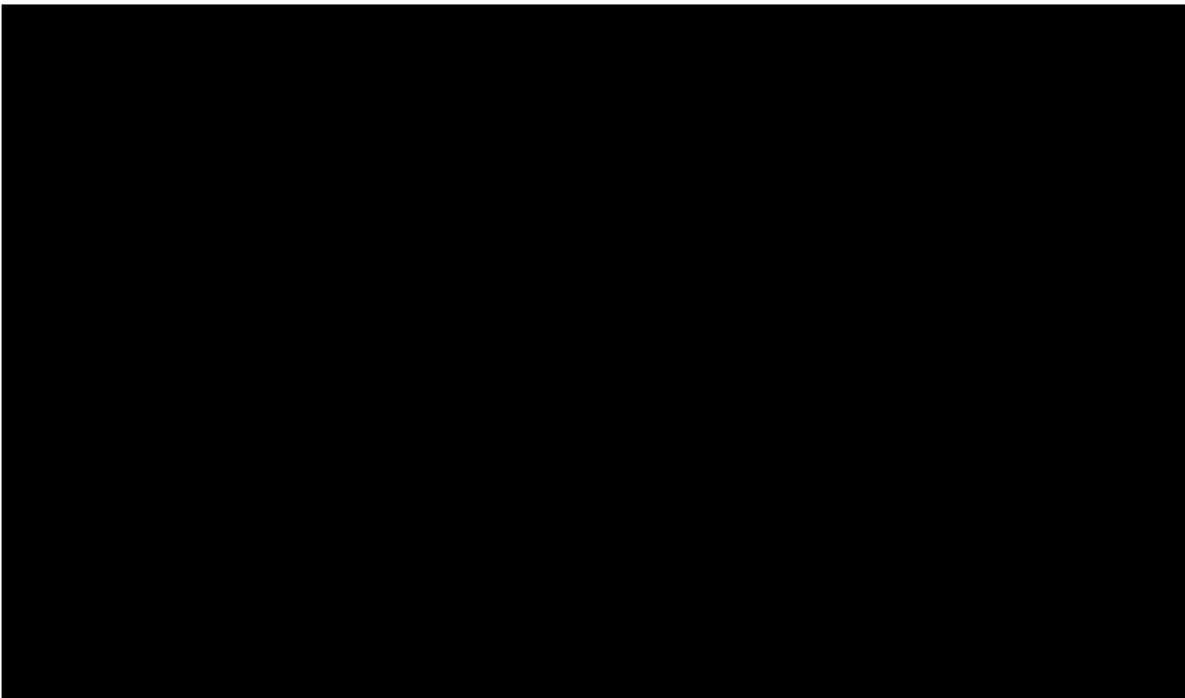
- Traffic on Grand Avenue (particularly trucks and buses) is a problem, especially in front of the school. The principal reported that the school's windows are kept shut during school hours in order to minimize the impact of noise and exhaust fumes associated with the passing trucks and buses. School representatives suggested that an alternate truck route through the area be considered (i.e., the Long Island Expressway service road, via Rust Street and Maurice Avenue).
- Traffic congestion is a problem during both arrival and dismissal times. Congestion is often experienced at the intersection of Grand Avenue/Flushing Avenue/Maspeth Avenue/64th Street (a very complex intersection), as well as at the intersections of 61st Street/Grand Avenue and 61st Street/Flushing Avenue, and along Flushing Avenue from 61st Street to Remsen Place.

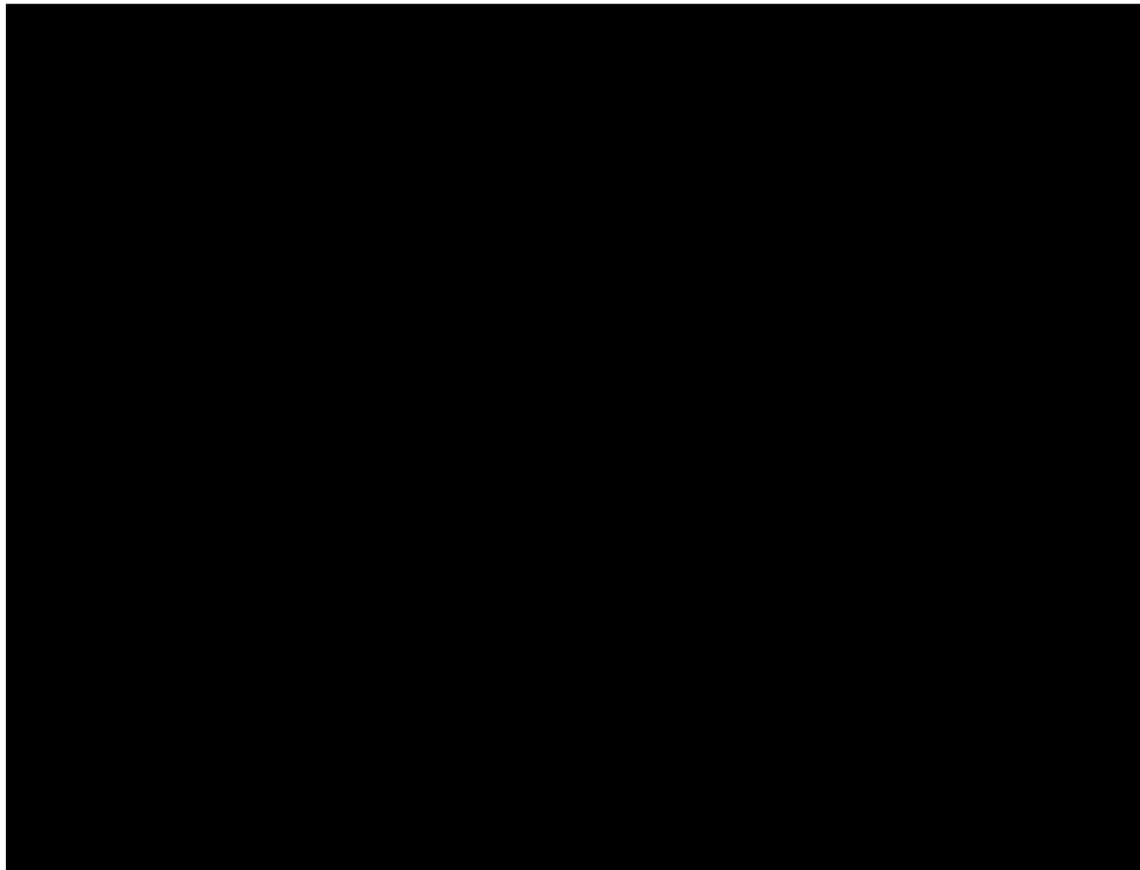
- School representatives requested that a school crossing guard be assigned to the intersection of Grand Avenue/64th Street.

(See Appendix for the school's survey responses.)



Figure 1: Looking south on 61st Street at a truck turning left onto westbound Grand Avenue





2.6 PRIMARY MODES OF TRANSPORT TO AND FROM SCHOOL

The school’s catchment area is typically defined by the Department of Education (DOE) and is typically shown in an Exhibit at the end of this section. However, because St. Stanislaus Kostka is a private parochial school, the actual “catchment area” is dependent upon other factors determined by the school administrators and, therefore, is not shown in this report.

According to school officials, approximately 40 percent of the students walk to school, 52 percent arrive by private vehicles, three percent arrive by yellow buses and five percent take public transportation (MTA buses). Table 1 presents the modes of travel for students at St. Stanislaus Kostka as identified by school representatives.

TABLE 1: MODES OF TRAVEL (AS ESTIMATED BY SCHOOL OFFICIALS)	STUDENTS (Percentage)
Walk	40%
Driven by Car	52%
School Bus	3%
MTA Bus	5%
MTA Subway	0%
Bicycle	0%
TOTAL	100%

2.7 ADDITIONAL STUDENT PEDESTRIAN TRAFFIC GENERATORS

Commercial land uses are located on Grand Avenue within walking distance of the school, and generate both pedestrian and vehicular traffic.

2.8 CROSSING GUARDS LOCATION

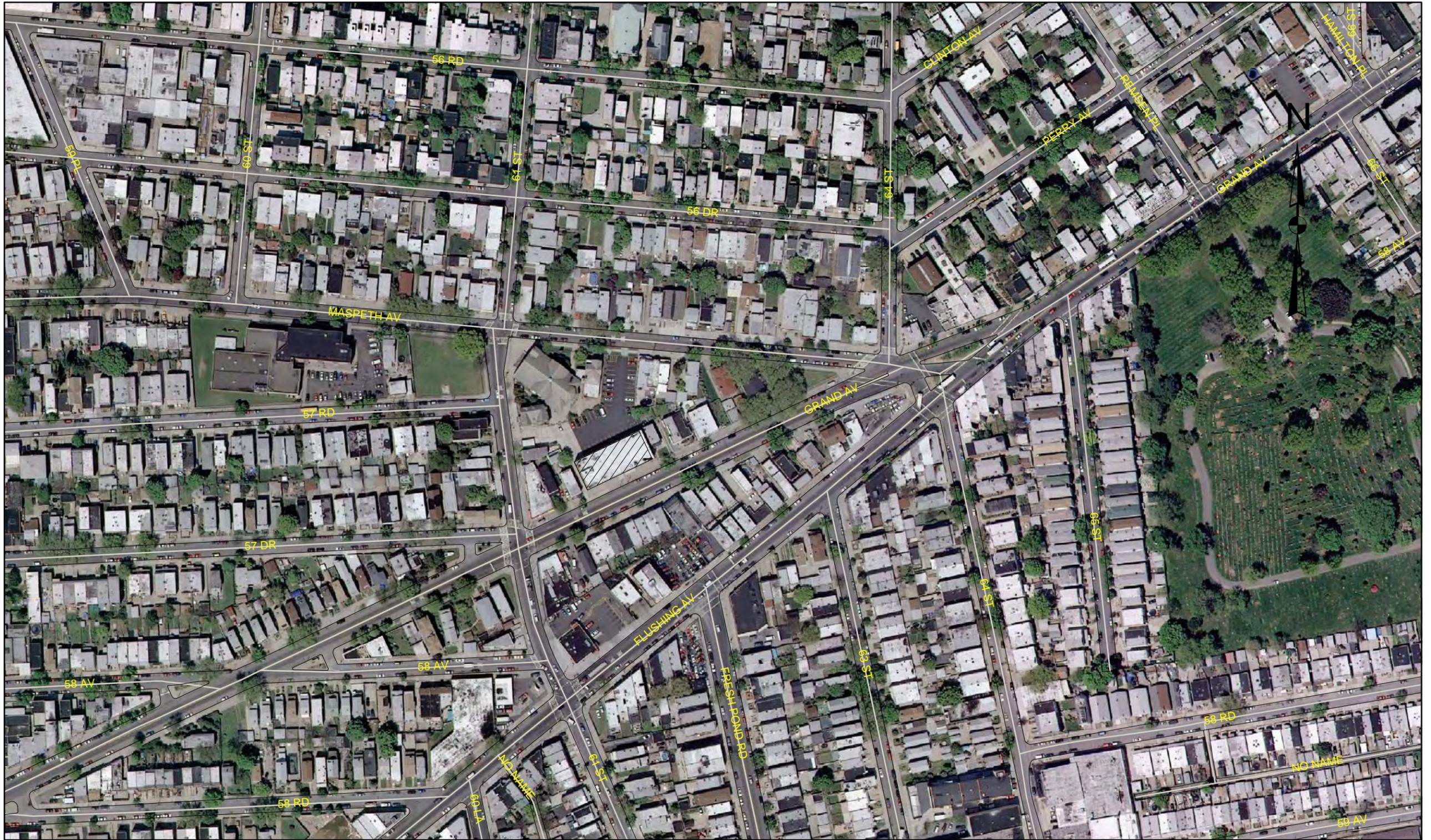
School crossing guards are assigned to the following intersections:

- Grand Avenue/61st Street (see Figure 3)
- Flushing Avenue/61st Street

The crossing guard locations are shown in Exhibit 3 at the end of this section.



Figure 3: School crossing guard shown assisting pedestrians crossing the east leg of the Grand Avenue/61st Street intersection



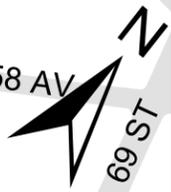
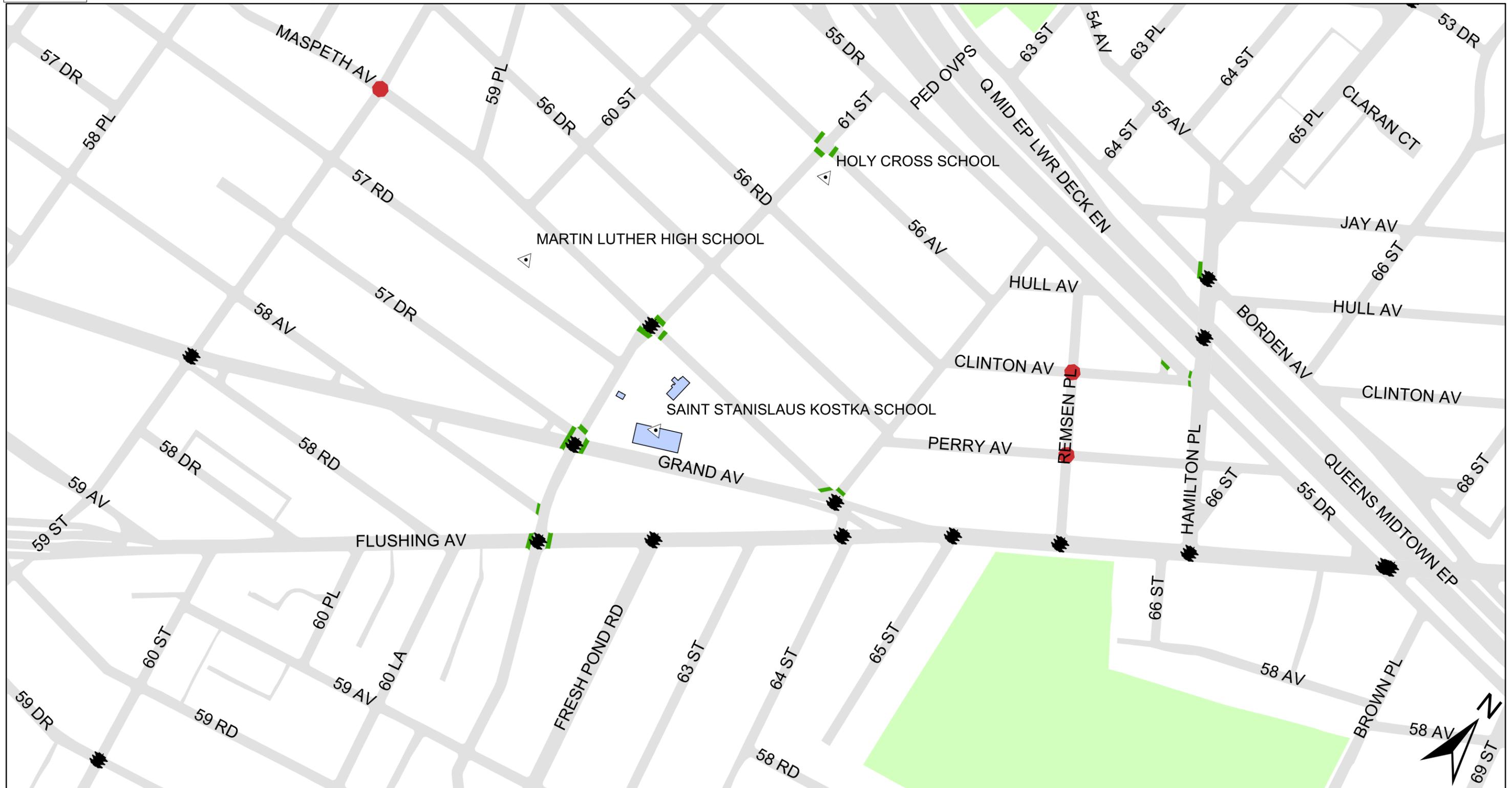
0 250 500 1,000 Feet

EXHIBIT 1
ST. STANISLAUS KOSTKA SCHOOL QUEENS

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 

Queens
SAINT STANISLAUS KOSTKA SCHOOL

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

Map created on 11/17/2006

EXHIBIT 2

COMM. BOARD: 405
 PRECINCT: 104

1.5.1 10

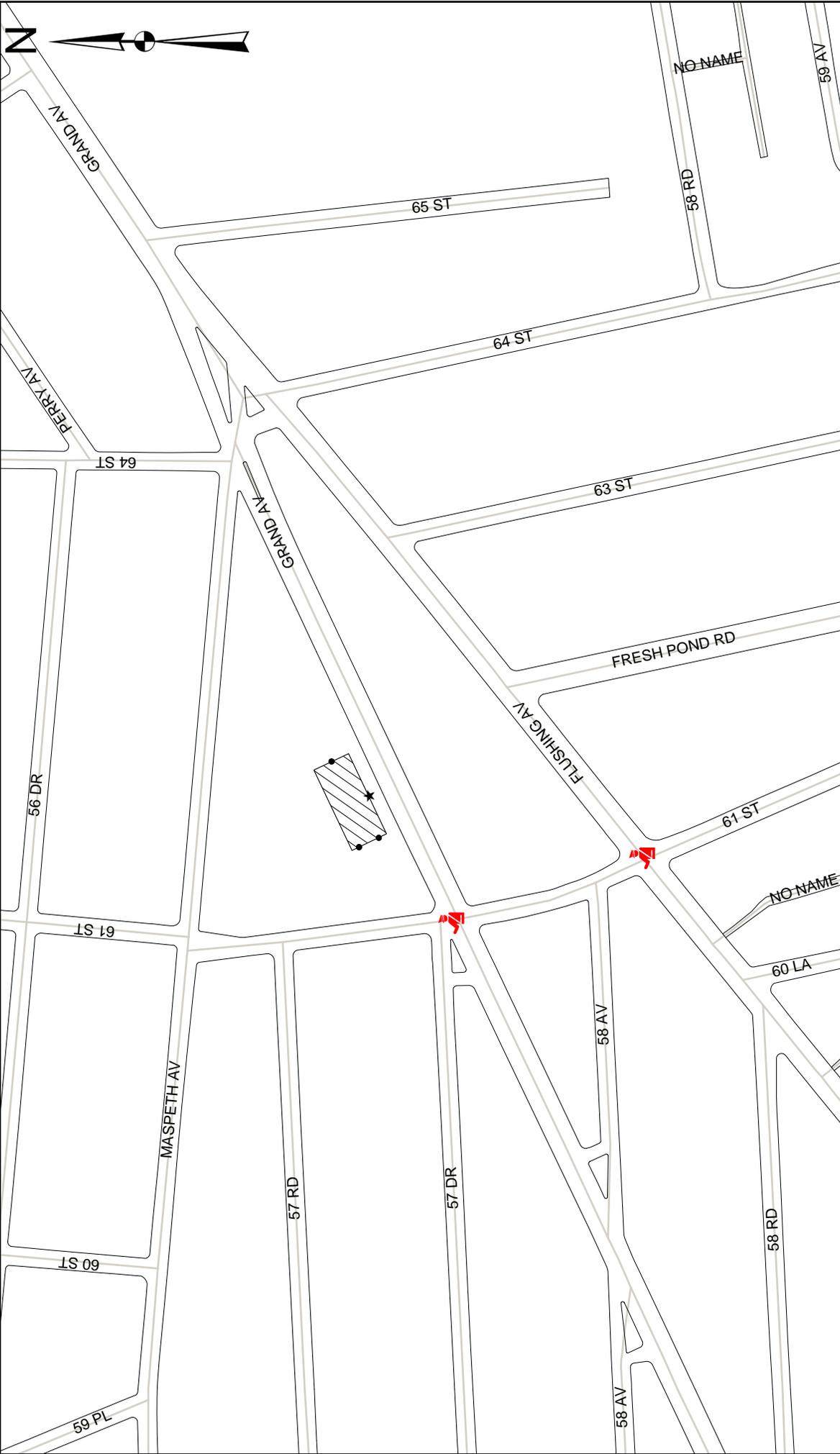


EXHIBIT 3

ST. STANISLAUS KOSTKA SCHOOL QUEENS

CROSSING GUARDS LOCATION

LEGEND:



CROSSING GUARD LOCATION

1,000 Feet

500

250

0

10

3. TRAFFIC OPERATIONS

3.1 SCHOOL BUS OPERATIONS

According to school representatives, three percent of the students at St. Stanislaus Kostka ride a yellow school bus to and from the school. School bus operations consist of two school buses arriving in the morning and departing in the afternoon. These buses park on Grand Avenue in front of the school to load and unload students. School representatives estimate that approximately five percent of the students ride an MTA bus to and from the school. In the vicinity of St. Stanislaus Kostka, buses on the Q39, Q58, Q59 and B57 lines operate along Grand Avenue.

3.2 PARENT DROP-OFF OPERATIONS

According to school representatives, approximately 52 percent of the students at St. Stanislaus Kostka are driven to and from the school. During the interview with the consultant team, school representative did not report parent drop-off operations as being a problem. However, during the field visit, parents were observed double parking around the school while dropping off students in the morning and awaiting the afternoon dismissal. Parents were observed dropping off and picking up students both in front of the school, and in the parking lot behind the school which has ingress via 61st Street and egress via Maspeth Avenue.



Figure 4: Looking west along Grand Avenue in front of the school at dismissal time (school shown to the right)



Figure 5: Parents (in vehicles) are shown awaiting students at the beginning of the afternoon dismissal

3.3 PARKING REGULATIONS

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

3.4 EXISTING SCHOOL SIGNS AND MARKINGS

Exhibit 2 shows the existing signals and pavement markings around St Stanislaus Kostka. 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 6.

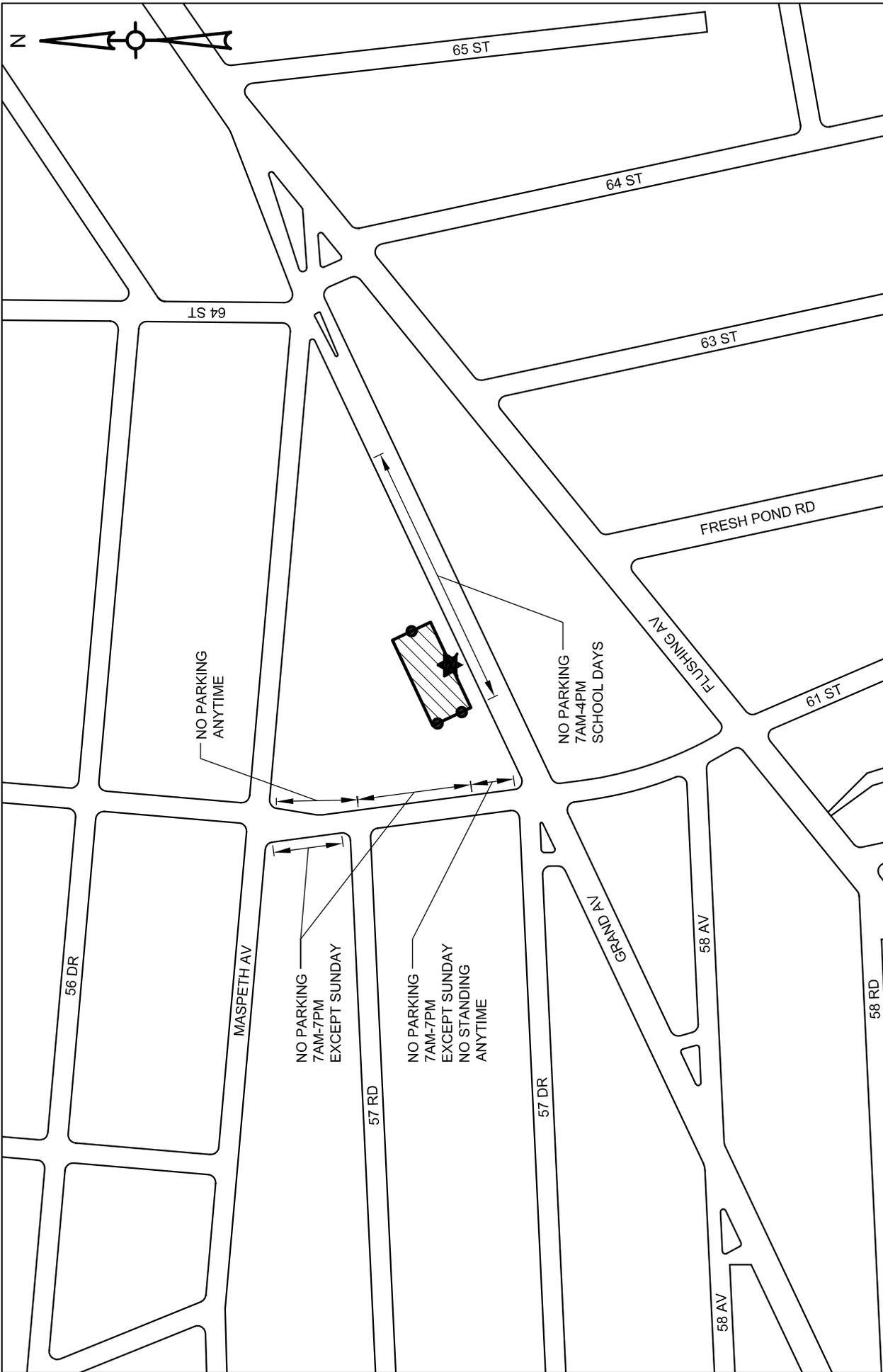
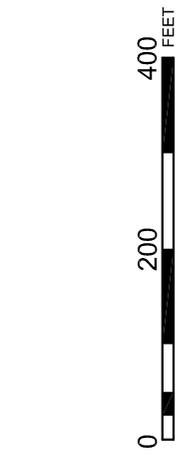


EXHIBIT 4
 ST. STANISLAUS KOSTKA SCHOOL
 QUEENS (36)
 EXISTING PARKING REGULATIONS



- 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 St. Stanislaus Kostka 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 the 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*
61 st Street and Flushing Avenue	24	2	0	0
61 st Street and 58 th Avenue	2	0	0	0
61 st Street and Grand Avenue/57 th Drive	34	2	0	0
61 st Street and 57 th Road	3	1	0	1
61 st Street and Maspeth Avenue	5	1	0	0
Maspeth Avenue and Grand Avenue/64 th Street	10	0	0	0
Flushing Avenue and 64 th Street	22	2	0	0
TOTAL	100	8	0	1

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

TABLE 3: ACCIDENT SUMMARY OF NYPD DATA (2001-2004)				
INTERSECTION	TOTAL ACCIDENTS	PEDESTRIAN ACCIDENTS	PEDESTRIAN FATALITIES	SCHOOL-RELATED ACCIDENTS*
61 st Street and Flushing Avenue	33	3	0	0
61 st Street and 58 th Avenue	1	0	0	0
61 st Street and Grand Avenue/57 th Drive	21	1	0	0
61 st Street and 57 th Road	2	0	0	0
61 st Street and Maspeth Avenue	9	0	0	0
Grand Avenue and 64 th Street/Maspeth Avenue	21	1	0	0
Flushing Avenue and 64 th Street	29	1	0	0
TOTAL	116	6	0	0

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

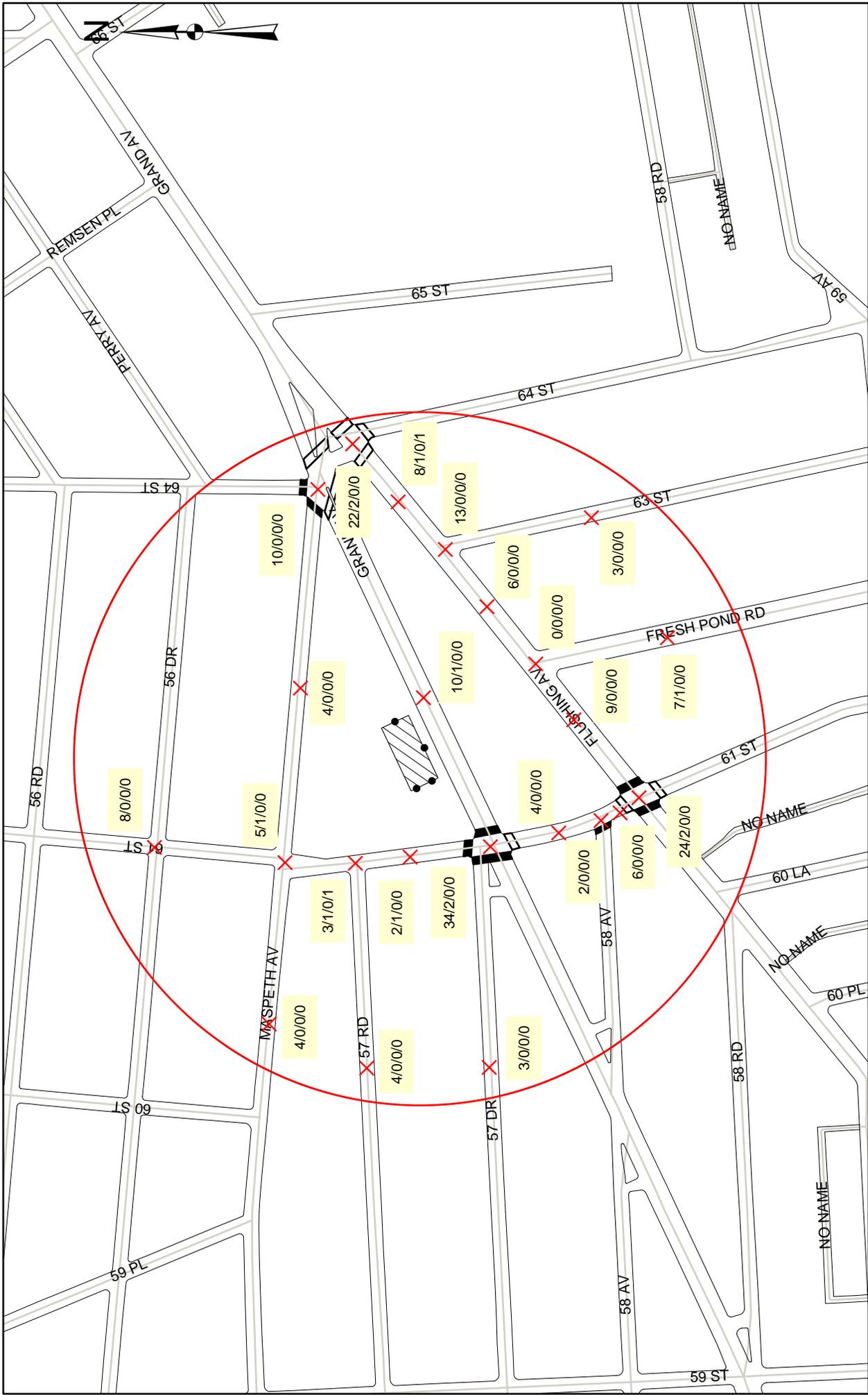


EXHIBIT 5
ST. STANISLAUS KOSTKA SCHOOL QUEENS
ACCIDENT SUMMARY (1998-2000)

LEGEND:

- ACCIDENT LOCATION (X)
- SCHOOL CROSSWALK (thick dashed line)
- SCHOOL CROSSWALK ASSIGNED TO ANOTHER SCHOOL (thin dashed line)
- BORDER OF 700 FEET (red circle)

Scale: 0, 250, 500, 1,000 Feet

X/X/XX	TOTAL ACCD	PED ACCD	FATAL	SCHOOL_PED ACCD
8/0/0/0	8	0	0	0
5/1/0/0	5	1	0	0
4/0/0/0	4	0	0	0
3/1/0/1	3	1	0	1
2/1/0/0	2	1	0	0
34/2/0/0	34	2	0	0
4/0/0/0	4	0	0	0
3/0/0/0	3	0	0	0
10/0/0/0	10	0	0	0
4/0/0/0	4	0	0	0
10/1/0/0	10	1	0	0
6/0/0/0	6	0	0	0
0/0/0/0	0	0	0	0
3/0/0/0	3	0	0	0
9/0/0/0	9	0	0	0
7/1/0/0	7	1	0	0
4/0/0/0	4	0	0	0
2/0/0/0	2	0	0	0
6/0/0/0	6	0	0	0
24/2/0/0	24	2	0	0
8/1/0/1	8	1	0	1
13/0/0/0	13	0	0	0
22/2/0/0	22	2	0	0

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 St. Stanislaus Kostka.

3.6.1 61st Street and Flushing Avenue

This is a four-leg signalized intersection with school crosswalks located across the east and west legs of Flushing Avenue, and pedestrian crosswalks located across the north and south legs of 61st Street. 61st Street is a two-way north-south street with one travel lane and one on-street parking lane on each side of the roadway. Flushing Avenue is a two-way east-west roadway with one travel lane and one on-street parking lane on each side of the roadway (see Figure 6). Flushing Avenue is also a designated “through” truck route in the vicinity of St. Stanislaus Kostka.

There were a total of 24 accidents reported at this intersection between 1998 and 2000 (Table 2), including two pedestrian accidents, neither of which was school-related. There were no pedestrian fatalities reported at this intersection between 1998 and 2000.

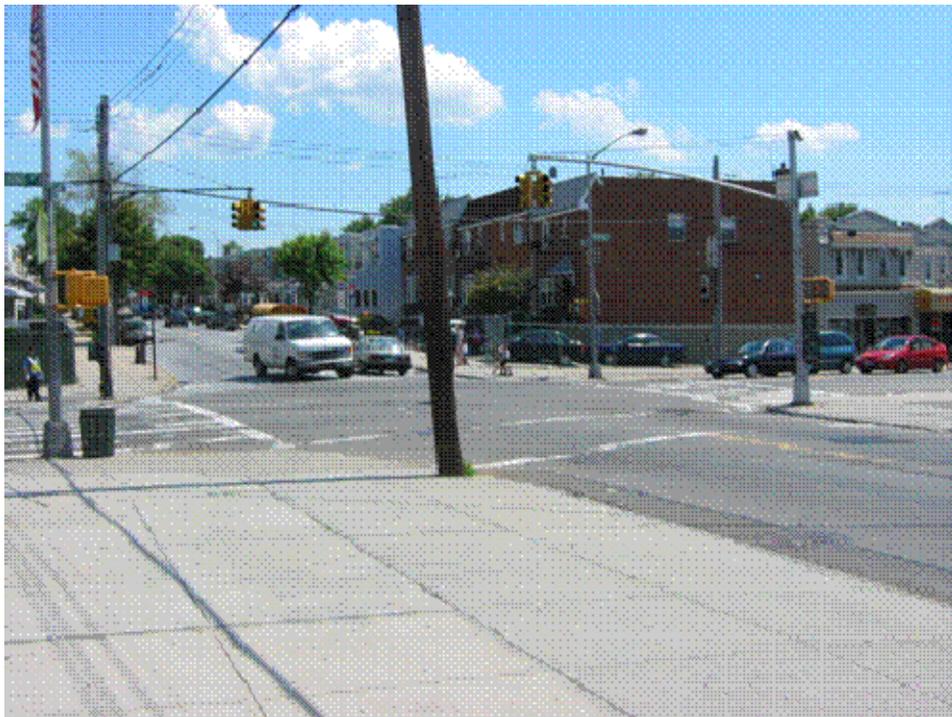


Figure 6: Looking southwest at the 61st Street and Flushing Avenue intersection

3.6.2 61st Street and 58th Avenue

This is a three-leg unsignalized intersection with a school crosswalk located across the west leg of 58th Avenue. There are no crosswalks located across the north or south legs of 61st Street. 61st Street is a two-way north-south street with one travel lane and one on-street parking lane on each side of the roadway. 58th Avenue is a one-way eastbound street with one travel lane and on-street parking permitted on both sides of the roadway. The 58th Avenue approach is stop-controlled at 61st Street (see Figure 7).

There were a total of two accidents reported at this intersection between 1998 and 2000 (Table 2), but neither was a pedestrian accident.



Figure 7: Looking west along 58th Avenue from the intersection with 61st Street

3.6.3 61st Street and Grand Avenue/57th Drive

This is a five-leg signalized intersection with school crosswalks located across the east leg of Grand Avenue, the west legs of Grand Avenue and 57th Drive, and the north leg of 61st Street. A pedestrian crosswalk is located across the south leg of 61st Street. 61st Street is a two-way north-south street with one travel lane and one on-street parking lane on each side of the roadway. Grand Avenue is a two-way east-west roadway with one travel lane and one on-street parking lane on each side of the roadway. Grand Avenue is also a designated “through” truck route in the vicinity of St. Stanislaus Kostka. 57th Drive is a one-way westbound street with one travel lane and on-street parking permitted on both sides of the roadway (see Figures 8 and 9).

There were a total of 34 accidents reported at this intersection between 1998 and 2000 (Table 2), including two pedestrian accidents, neither of which was school-related. There were no pedestrian fatalities reported at this intersection between 1998 and 2000.

School representatives reported a problem with vehicles speeding on 61st Street in the vicinity of St. Stanislaus Kostka. In order to verify the existence of a speeding problem and to determine its extent, a spot speed survey was conducted on 61st Street between Grand Avenue and Maspeth Avenue in both the northbound and southbound directions.

In the analysis of vehicle speeds, the 85th percentile speed is considered to be the representative speed for a specified street segment. By definition, this is the speed at which 85 percent of the surveyed vehicles are traveling below and 15 percent of the surveyed vehicles are traveling above. An 85th percentile speed exceeding a 30 mph threshold indicates a potential speeding problem that may require appropriate traffic calming measures.

The results of the spot speed survey indicated that vehicles on 61st Street were traveling at 85th percentile speeds of 33 mph in the northbound direction and 31 mph in the southbound direction. Both of these 85th percentile speeds are above the 30 mph threshold. However, this section of 61st Street cannot accommodate the NYCDOT design criteria for placement of speed reducers. The criterion requires a minimum spacing of 200 feet from a traffic signal, and at least 100 feet from the tangent point of a curve or intersection, and/or crosswalk for placement of a speed reducer in the roadway. Therefore, this would require a minimum distance of 300 feet between the 61st Street and Grand Avenue/57th Drive intersection and the 61st Street and 57th Road intersection. The existing distance is only approximately 200 feet. In addition, a curb extension (neckdown) would not be conducive to the character of the roadway at this location.

School representatives also reported a speeding problem on Grand Avenue in front of the school. In order to verify the existence of a speeding problem and to determine its extent, a spot speed survey was also conducted on Grand Avenue between 61st and 64th Streets in the both the eastbound and westbound directions. The results of this survey indicated that vehicles on Grand Avenue were traveling at 85th percentile speeds of 35 mph in the eastbound direction and 37 mph in the westbound direction. Both of these speeds exceed the 30 mph threshold. However, Grand Avenue is a local bus route, which precludes the use of a speed reducer. Curb extensions (neckdowns) would also not be conducive to the character of the roadway at this location. This location would also not be a candidate for a reduced “school zone” speed limit since Grand Avenue is a primary arterial roadway through Queens. However, a technique often used to slow traffic on a roadway is the use of an automatic “speed board” which informs an approaching driver of the actual speed of the vehicle, and also displays a reminder of the speed limit for the roadway.

The summaries of the spot speed surveys on 61st Street and Grand Avenue are provided in the Appendix at the end of the document.



Figure 8: Looking west to Grand Avenue and 57th Drive at the intersection with 61st Street

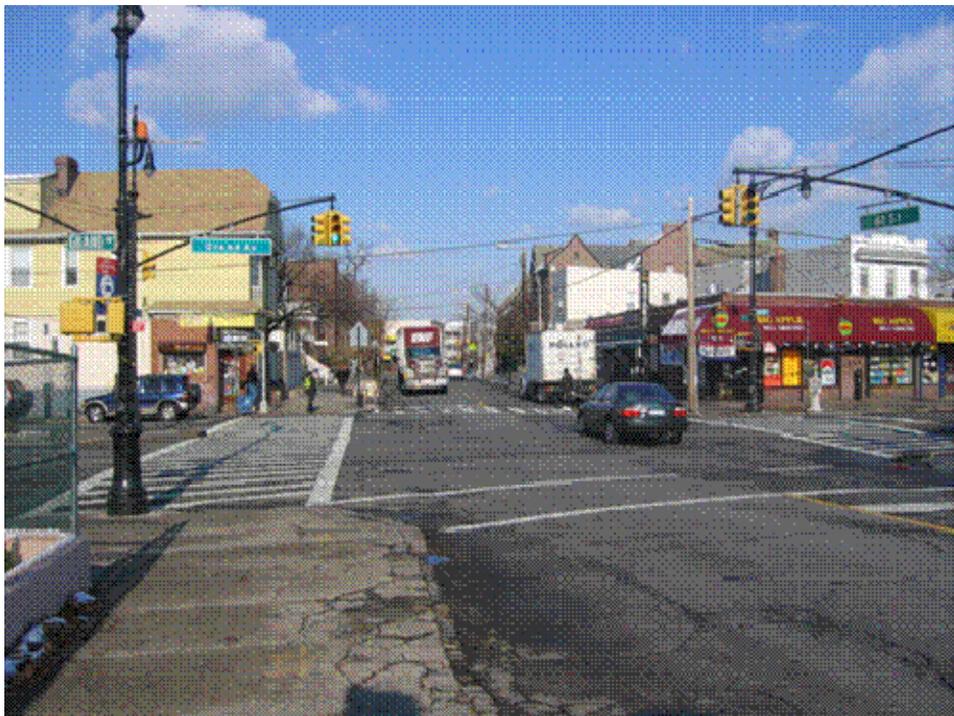


Figure 9: Looking north on 61st Street the intersection with Grand Avenue and 57th Drive

3.6.4 61st Street and 57th Road

This is a three-leg unsignalized intersection with no school or pedestrian crosswalks. 61st Street is a two-way north-south street with one travel lane and one on-street parking lane on each side of the roadway. 57th Road is a one-way westbound street with one travel lane and on-street parking permitted on both sides of the roadway (see Figure 10).

There were a total of three accidents reported at this intersection between 1998 and 2000 (Table 2), including one pedestrian accident that was also school-related. The school-related accident occurred at approximately 8:00 am on Monday, November 2, 1998 under daylight conditions, and involved a 13-year old pedestrian who was reported struck by a vehicle while crossing the street within a “marked crosswalk” at the intersection. (As noted previously, however, there are no marked crosswalks at this intersection.) The specific location of the accident was not reported. The pedestrian was reported to have sustained an “incapacitating injury.” The accident occurred on a straight and level segment, and the roadway and weather conditions were reported as dry and clear, respectively.



Figure 10: Looking west on 57th Road from the intersection with 61st Street

3.6.5 61st Street and Maspeth Avenue

This is a four-leg signalized intersection with school crosswalks located across all four legs. South of Maspeth Avenue, 61st Street is a two-way north-south street with one travel lane and one on-street parking lane on each side of the roadway. North of Maspeth Avenue, 61st Street is a one-way northbound street with one travel lane and on-street parking permitted on both sides of the roadway. East of 61st Street, Maspeth Avenue is a

one-way westbound street with one travel lane and on-street parking permitted on both sides of the roadway. West of 61st Street, Maspeth Avenue is a two-way east-west roadway with one travel lane and one on-street parking lane on each side of the roadway (see Figures 11 and 12).

There were a total of five accidents reported at this intersection between 1998 and 2000 (Table 2), including one pedestrian accident that was not school-related or a fatal accident.



Figure 11: Looking west on Maspeth Avenue to the intersection with 61st Street



Figure 12: Looking north on 61st Street to the intersection with Maspeth Avenue

3.6.6 Grand Avenue and Maspeth Avenue/64th Street

This is a six-leg signalized intersection with school crosswalks located across the west leg of Maspeth Avenue and the north leg of 64th Street. Pedestrian crosswalks are located across the northeast leg of Grand Avenue/Maspeth Avenue and the southwest leg of Grand Avenue. Grand Avenue is a two-way east-west roadway with one travel lane and one on-street parking lane on each side of the roadway. Grand Avenue is also a designated “through” truck route. At the intersection with Grand Avenue and 64th Street, Maspeth Avenue is a one-way westbound street with one travel lane and on-street parking permitted on both sides of the roadway. 64th Street is a one-way southbound street with one travel lane and on-street parking permitted on both sides of the roadway (see Figures 13 through 16).

Raised concrete islands separate and channelize traffic flow between this intersection and the Flushing Avenue/64th Street intersection described below. (Refer to Exhibit 1 for an aerial view of these closely-spaced intersections.) It should be noted that there is an exclusive pedestrian interval incorporated into the timing sequence for the Grand Avenue/Maspeth Avenue/64th Street intersection that allows pedestrians to cross all legs of the intersection simultaneously. In addition, there is a standard “WALK” interval for each phase of the traffic signal.

There were a total of ten accidents reported at this intersection between 1998 and 2000 (Table 2), although none of these were pedestrian accidents.



Figure 13: Looking southeast at the Grand Avenue/Maspeth Avenue/64th Street intersection



Figure 14: Looking southwest on Grand Avenue at the intersection with Maspeth Avenue/64th Street



Figure 15: Looking southeast at 64th Street across Grand Avenue toward Flushing Avenue



Figure 16: Looking west along Maspeth Avenue at the intersection with Grand Avenue/64th Street (Grand Avenue is shown to the left and 64th Street is to the right)

3.6.7 Flushing Avenue and 64th Street

This is a four-leg signalized intersection with pedestrian crosswalks located across all four legs. Flushing Avenue is a two-way east-west roadway with one travel lane and one on-street parking lane on each side of the roadway, and is also a designated “through” truck route. South of the intersection, 64th Street is a two-way north-south roadway with one travel lane and one on-street parking lane on each side of the roadway (see Figures 17 and 18).

There were a total of 22 accidents reported at this intersection between 1998 and 2000 (Table 2), including two pedestrian accidents, neither of which was school-related. There were no pedestrian fatalities at this intersection between 1998 and 2000.



Figure 17: Looking northeast on Flushing Avenue across the intersection with 64th Street, to Grand Avenue



Figure 18: Looking southwest on Flushing Avenue across the intersection with 64th Street

3.7 SIGNAL TIMING

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

TABLE 4: PEDESTRIAN CROSSING TIMES AT SIGNALIZED INTERSECTIONS				
INTERSECTION	CROSSWALK LENGTH (FEET)	PEDESTRIAN TIME ACTUAL (SECONDS)	PEDESTRIAN TIME REQUIRED ⁽¹⁾ (SECONDS)	TIMING ADJUSTMENT REQUIRED?
Flushing Avenue and 61st Street				
crossing Flushing Avenue	47	43	19	No
crossing 61 st Street	38	43	16	No
Grand Avenue and 61st Street/57th Drive				
crossing Grand Avenue	47	43	19	No
crossing 61 st Street	32	43	14	No
crossing 57 th Drive	30	43	13	No
Maspeth Avenue and 61st Street				
crossing Maspeth Avenue	37	23	16	No
crossing 61 st Street	48	35	19	No
Grand Avenue and Maspeth Avenue/64th Street				
crossing Grand Avenue (east leg)	57	48 ⁽²⁾	22	No
crossing Grand Avenue (west leg)	39 (WB)	48	16	No
	43 (EB)	48	18	
	82 (total)	48	31	
crossing Maspeth Avenue	37	48	16	No
crossing 64 th Street (north leg)	30	60	13	No
Flushing Avenue and 64th Street				
crossing Flushing Avenue	46	38	19	No
crossing 64 th Street (north leg)	32	48	14	No
crossing 64 th Street (south leg)	38	48	16	No

1. A child pedestrian walking rate of 3 feet/second, plus 3 seconds reaction time, was utilized in the calculation of the required pedestrian crossing time.
2. There is an exclusive pedestrian interval incorporated into the timing sequence for this intersection, allowing pedestrians to cross Grand Avenue, 64th Street, and Maspeth Avenue simultaneously. In addition, there is a standard “WALK” interval allocated for each phase of the signal.

WB = Westbound; EB = Eastbound

3.8 PHYSICAL CONDITIONS

3.8.1 Roadways and Sidewalks

The roadways and sidewalks in the vicinity of St. Stanislaus Kostka were observed to be in fair condition. Sidewalks were found to vary from approximately 10 to 15 feet wide on the school block-faces and were observed to be in fair condition. However, there is a cracked and settled sidewalk on the west side of 61st Street at Grand Avenue (see Figure 9, showing cracked and settled sidewalk with evidence of pooling).

3.8.2 Pedestrian Ramps

Pedestrian ramps in the vicinity of the school were observed to be standard and in fair condition. However, there were several locations where pedestrian ramps were missing or non-standard. These locations are as follows:

61st Street and Flushing Avenue intersection

- Pedestrian ramps are missing on the east and west sides of 61st Street (2 ramps), for the crosswalk located across the north leg of the intersection.
- The existing pedestrian ramp located on the southwest corner of the intersection, for the crosswalk across the south leg, has a small lip at the curb and does not provide a smooth transition from pavement to sidewalk.

61st Street and 58th Avenue intersection

- A pedestrian ramp is missing on the southwest corner of the intersection, for the school crosswalk located across the west leg (58th Avenue).
- The existing pedestrian ramp on the northwest corner of the intersection, for the school crosswalk located across the west leg (58th Avenue), is too narrow.

Maspeth Avenue and Grand Avenue/64th Street intersection

- Pedestrian ramps are missing for the crosswalk located across the west (Grand Avenue) leg of the intersection (both sides). In addition, a pedestrian cut-through area is also missing in the raised concrete channelization island along the center of Grand Avenue.
- A pedestrian ramp is missing on the northeast corner of the intersection, for the crosswalk located across the north leg (64th Street).
- The pedestrian ramp on the southeast corner of the intersection (on the raised concrete island), for the crosswalk located across the east leg of Grand Avenue, is too narrow.

Flushing Avenue and 64th Street intersection

- A pedestrian ramp is missing on the southeast corner of the intersection for the crosswalk located across the east leg.
- The existing pedestrian ramp on the northeast corner of Flushing Avenue (on the raised concrete island), for the crosswalk located across the east leg of the intersection, is too narrow.

In addition, obstructions within the crosswalk paths were observed at the following locations:

61st Street and Flushing Avenue intersection

- A utility pole and a fire hydrant on the northeast corner of the intersection are within the path for the crosswalk located across the east leg.
- A light pole on the southwest corner of the intersection is within the path for the crosswalk located across the west leg.
- A utility pole on the southeast corner of the intersection is within the path for the crosswalk located across east leg.

61st Street and Grand Avenue/57th Drive intersection

- A light pole on the southwest corner of the intersection is within the path for the crosswalk located across the west leg.
- A utility pole on the northeast corner of the intersection is within the path for the crosswalk located across the east leg.

Maspeth Avenue and Grand Avenue/64th Street

- A curbside drainage inlet is located in the center of the pedestrian crosswalk located across the west (Grand Avenue) leg of the intersection.
- A light pole is located within the path for the pedestrian crosswalk located across the west (Grand Avenue) leg of the intersection.

4. PROPOSED MEASURES TO IMPROVE SCHOOL PEDESTRIAN SAFETY

This section describes the proposed measures to improve school pedestrian safety around St. Stanislaus Kostka. 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 St. Stanislaus Kostka 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*

There are existing “NO PARKING 7AM-4PM SCHOOL DAYS” signs along the north curb of Grand Avenue in front of the school. These signs should be replaced with “NO STANDING 7AM-4PM SCHOOL DAYS” signs. (This is a typical requirement for all NYC schools that standing be prohibited for a distance of 30 feet in front of the school main entrance in order to provide for emergency access to and from the school.)

➤ *Place advance stop bar 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 school crosswalks.

➤ *Request that NYPD assign a crossing guard at the intersection of Grand Avenue and 64th Street*

School officials requested that an additional crossing guard be located at the intersection of Grand Avenue and 64th Street to assist students in safely navigating across this high-volume intersection. Therefore, the following action is recommended:

- Assign a crossing guard to the intersection of Grand Avenue and 64th Street.

➤ *Install new school crosswalk and assign a crossing guard*

No marked crosswalk exists across the west leg of the unsignalized 61st Street and 57th Road intersection. The installation of a school crosswalk at this location would be beneficial to the safety of student pedestrians crossing at this location, because it will provide motorists and pedestrians with a clear indication of the crossing location. As it is an uncontrolled intersection, the installation of the crosswalk will require assigning a crossing guard at this location.

Therefore, the following actions are recommended:

- Install a new school crosswalk across the west leg of the 61st Street and 57th Road intersection.
- Assign a crossing guard to the intersection of 61st Street and 57th Road intersection.

➤ Consider revising the truck route on Grand Avenue

As part of the Citywide Truck Route Management and Community Impact Reduction study conducted by NYCDOT, the Department evaluated the feasibility of the community developed Maspeth Bypass Route, which would route truck traffic off of Grand Avenue and utilize less residential streets, including the Long Island Expressway and Rust Street to bypass this area. The DOT has reviewed the proposal and has found it preliminarily feasible to redirect truck traffic to existing truck routes north and west of Grand Avenue, pending further investigation.

Therefore, it is recommended that:

- NYCDOT implement improvements proposed as part of Maspeth Bypass Study, specifically the redirection of truck traffic from Grand Avenue in the vicinity of St. Stanislaus Kostka. With a truck restriction on Grand Avenue, additional signage would be and other improvements throughout the area would necessary on several corridors and approaches to Grand Avenue to fully implement the Bypass route.

However, DOT is in the process of developing short-term mitigation measures, including in the Maspeth Area advising trucks to use less populated routes to access the highways and existing truck routes.

4.2 LONG-TERM MEASURES

➤ Extend sidewalk on the southwest corner of the 61st Street and Maspeth Avenue intersection

There is excessive pavement area on the southwest corner of the 61st Street and Maspeth Avenue intersection.

Therefore, it is recommended that:

- The sidewalk on the southwest corner should be extended as shown in Exhibit 6. This improvement will shorten the distance required for pedestrians to cross the south leg of the intersection, reduce the required turning radius for eastbound right-turning vehicles (thus reducing vehicle speeds), and contribute to the calming of traffic on 61st Street by narrowing the roadway cross-section.

➤ Modify the existing raised concrete channelization island at the intersection of Flushing Avenue/Grand Avenue/64th Street

As mentioned previously in this report, school officials reported truck and bus traffic on Grand Avenue as a problem, especially in front of the school.

The Maspeth Bypass Study has proposed that the existing truck route on Grand Avenue be removed between Rust Street and Flushing Avenue. With a truck restriction on Grand Avenue, the study identified the need for additional signage on several corridors and approaches to nearby streets. In addition, the study recommended modifying existing traffic islands, striping, and other geometric features at the intersection of Flushing Avenue/Grand Avenue/64th Street.

Therefore, it is recommended that:

- The existing raised concrete channelization island at the Flushing Avenue/Grand Avenue/64th Street intersection be modified as shown in Exhibit 6 (Detailed drawing are shown in the Appendix)
- The traffic signals at the Grand Avenue and 64th Street intersection, and the Flushing Avenue and 64th Street intersection, be modified and coordinated according to the proposed geometric improvements.

Final details will be developed during the Final Design/Contract Document preparation.

➤ Modify the existing raised concrete channelization island at the intersection of 61st Street and Grand Avenue/57th Drive

There is excessive pavement area on the north side of the raised concrete channelization island at the 61st Street and Grand Avenue/57th Drive intersection.

Therefore, it is recommended to:

- Extend the existing island to the north and east, through the existing school crosswalk across the west leg of the intersection.
- Install a roadway diverges (split) sign, as shown in Exhibit 6.

➤ Construct pedestrian ramps

Pedestrian ramps in the vicinity of the school were observed to be standard and in fair condition. However, there were several locations where pedestrian ramps were missing or non-standard.

Therefore, it is recommended to:

61st Street and Flushing Avenue intersection

- Construct pedestrian ramps on the east and west sides of 61st Street (2 ramps), for the crosswalk located across the north leg of the intersection.
- For the crosswalk across the south leg, reconstruct the existing pedestrian ramp located on the southwest corner of the intersection, which has a small lip at the curb and does not provide a smooth transition from pavement to sidewalk.

61st Street and 58th Avenue intersection

- Construct a pedestrian ramp on the southwest corner of the intersection, for the school crosswalk located across the west leg (58th Avenue).
- Reconstruct the existing pedestrian ramp on the northwest corner of the intersection, for the school crosswalk located across the west leg (58th Avenue).

Maspeth Avenue and Grand Avenue/64th Street intersection

- Construct pedestrian ramps for the crosswalk located across the west (Grand Avenue) leg of the intersection (two ramps). In addition, construct a pedestrian cut-through area in the raised concrete channelization island along the center of Grand Avenue.
- Construct a pedestrian ramp on the northeast corner of the intersection, for the crosswalk located across the north leg (64th Street).
- For the crosswalk located across the east leg of Grand Avenue, reconstruct the pedestrian ramp on the southeast corner of the intersection (on the raised concrete island).

Flushing Avenue and 64th Street intersection

- Construct a pedestrian ramp on the southeast corner of the intersection, for the crosswalk located across the east leg.
- For the crosswalk located across the east leg of the intersection, reconstruct the existing pedestrian ramp on the northeast corner of the intersection (on the raised concrete island).

➤ *Relocate obstructions within crosswalk paths*

As noted previously in this report, there are several locations where obstructions were observed within the path of the crosswalk.

Therefore, it is recommended to:

61st Street and Flushing Avenue intersection

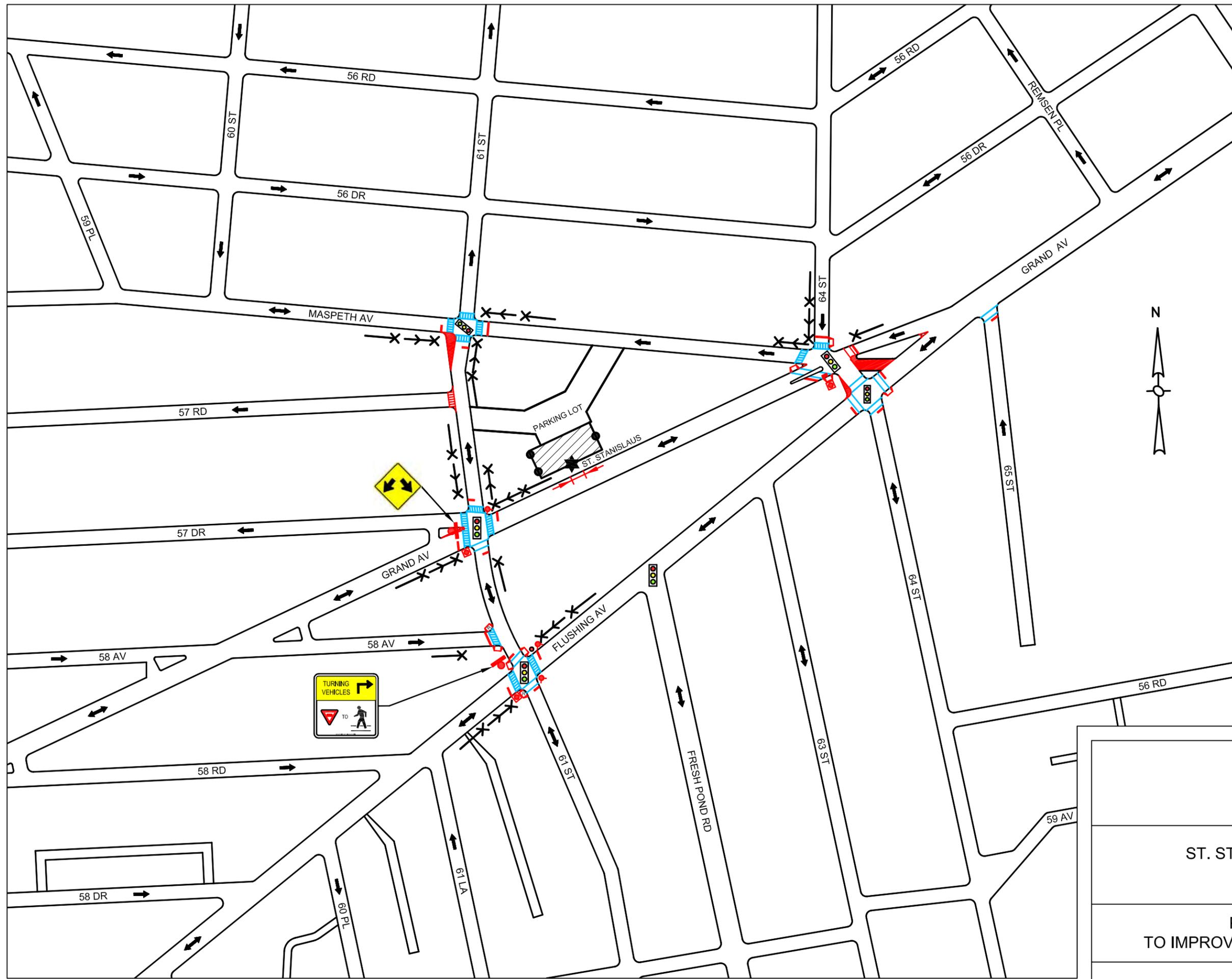
- Relocate the utility pole and fire hydrant on the northeast corner of the intersection that are within the path for the crosswalk located across the east leg.
- Relocate the light pole on the southwest corner of the intersection that is within the path for the crosswalk located across the west leg.
- Relocated the utility pole on the southeast corner of the intersection that is within the path for the crosswalk located across east leg.

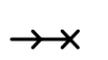
61st Street and Grand Avenue/57th Drive intersection

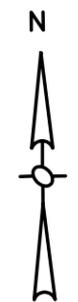
- Relocated the light pole on the southwest corner of the intersection that is within the path for the crosswalk located across the west leg.
- Relocated the utility pole on the northeast corner of the intersection that is within the path for the crosswalk located across the east leg.

Maspeth Avenue and Grand Avenue/64th Street

- Relocate the curbside drainage inlet that is in the center of the pedestrian crosswalk across the west (Grand Avenue) leg of the intersection.
- Relocate the light pole that is within the path for the pedestrian crosswalk located across the west (Grand Avenue) leg of the intersection.



- 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
 -  SIGNALIZED LOCATION
 -  EXISTING SCHOOL CROSSWALK
 -  EXISTING PEDESTRIAN CROSSWALK
 -  EXISTING SCHOOL CROSSWALK ASSIGNED TO ANOTHER SCHOOL
 -  LIGHT POLE TO BE RELOCATED
 -  PROPOSED PEDESTRIAN CROSSWALK
 -  PROPOSED SCHOOL CROSSWALK
 -  PROPOSED TRAFFIC SIGN
 -  PROPOSED PEDESTRIAN RAMP
 -  EXISTING PEDESTRIAN RAMP TO BE RECONSTRUCTED
 -  PROPOSED STOP LINE IN ADVANCE OF SCHOOL CROSSWALK
 -  PROPOSED "NO STANDING 7:00AM - 4:00PM SCHOOL DAYS"
 -  FIRE HYDRANT TO BE RELOCATED
 -  UTILITY POLE TO BE RELOCATED
 -  DRAINAGE INLET TO BE RELOCATED
 -  PROPOSED CURB EXTENSION (NECKDOWN)



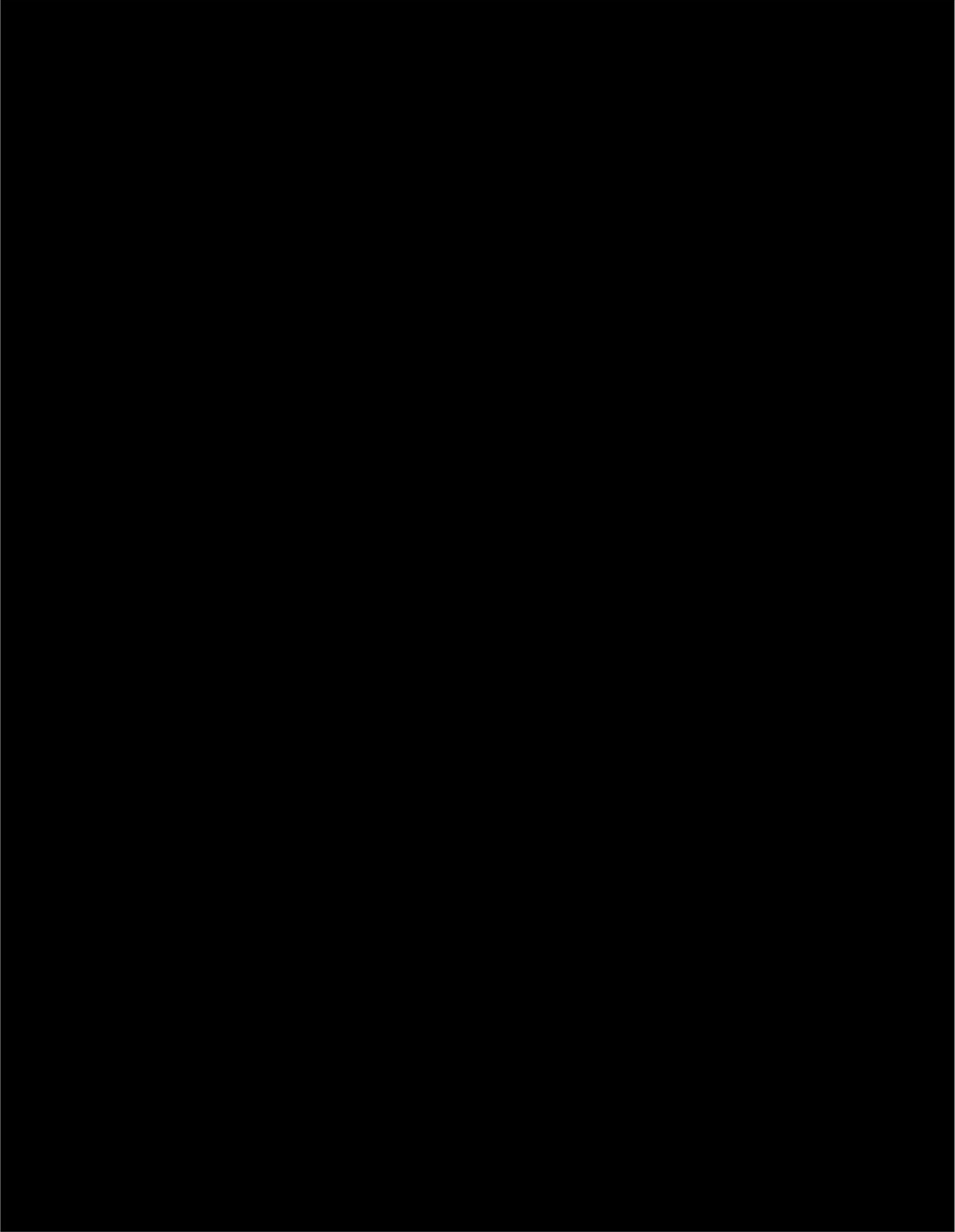
1" = 200'

EXHIBIT 6

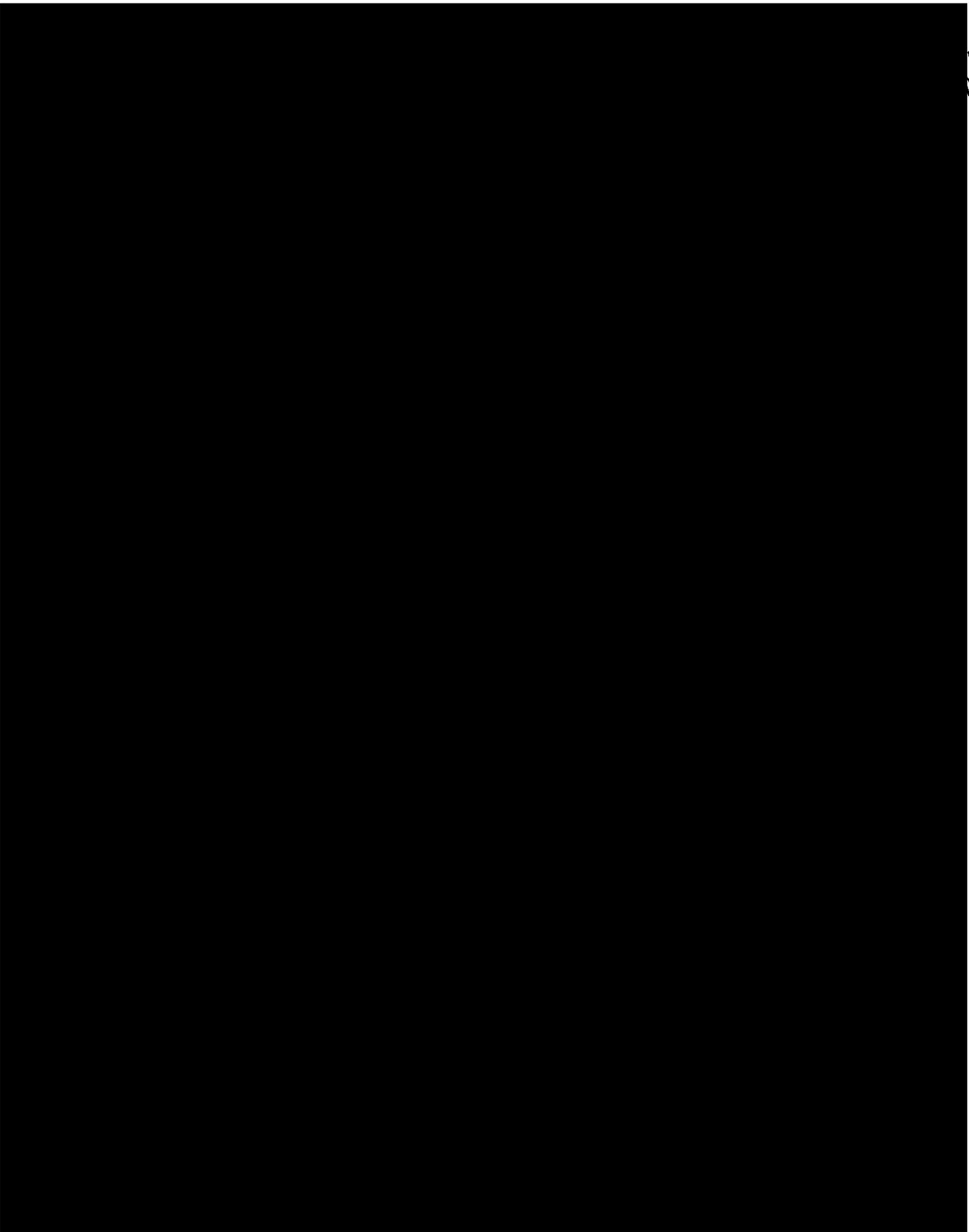
ST. STANISLAUS KOSTKA SCHOOL
QUEENS

POTENTIAL MEASURES
TO IMPROVE STUDENT PEDESTRIAN SAFETY

APPENDIX



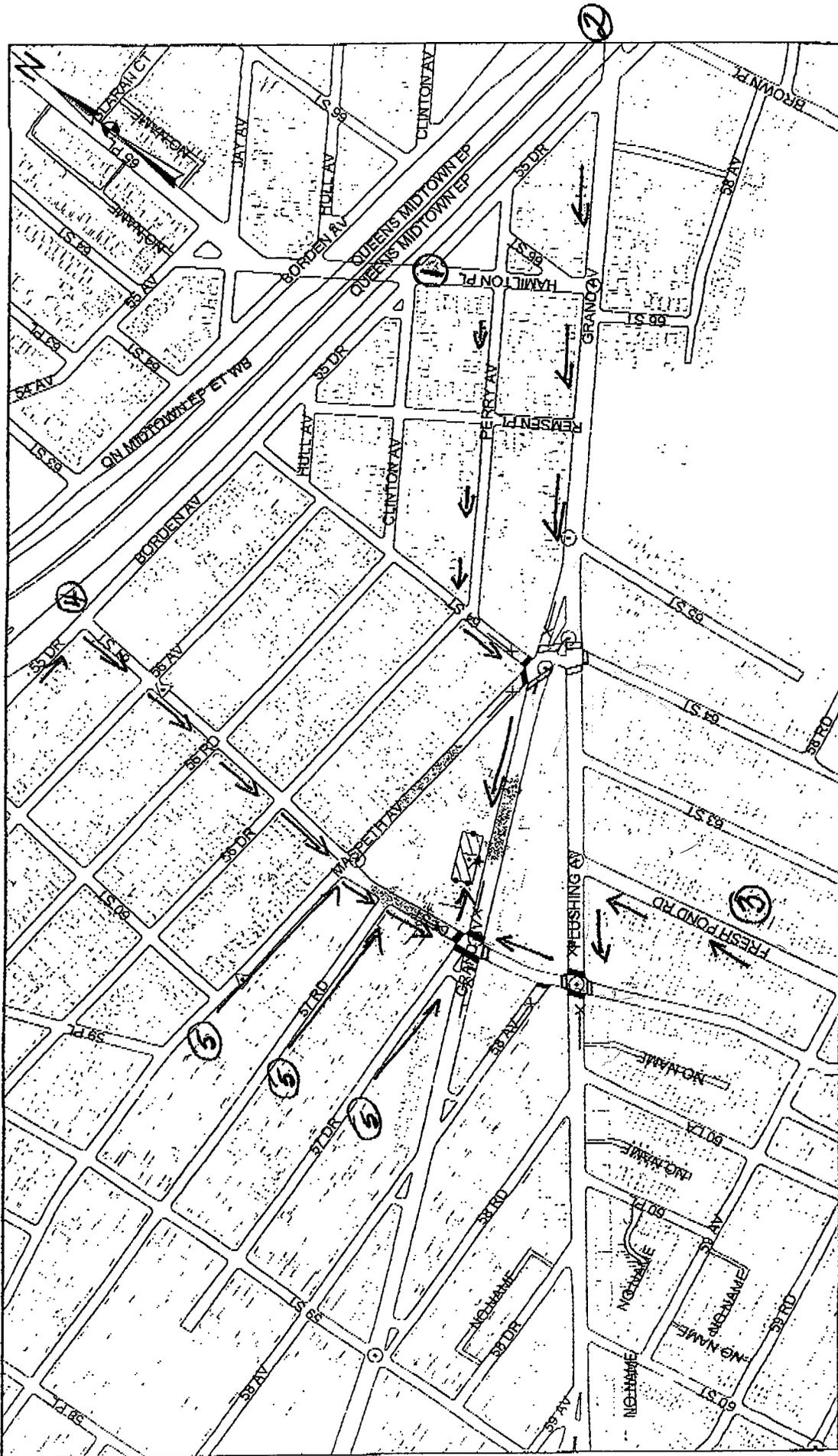
me



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
- PEO. X-WALK
- STOP LINE
- X-WALKS ASSOCIATED WITH OTHER SCHOOLS
- SPEED HUMP
- TRAFFIC SIGNAL
- ALL-WAY STOP
- 2-WAY STOP

**ST STANISLAUS KOSTKA SCHOOL
(36)**

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

CRIG. DATE: 08/01/97
GIS CONVERT: 04/21/02
REVISIONS:
DRAWING NO. _____
CC. JBT
MS. JLG
COMM. BOARD: _____
BOROUGH: QUEENS
PRECINCT: 104

SPOT SPEED STUDY

Date: **November 2, 2005** Time: **1:15 PM**
 Location: **61 St between Grand Ave and Maspeth St**
 Surveyor: **Richard Calvache & Hugo Salinas**

School: **St. Stanislaus**
 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	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	2	6.7%	6.7%	40	800
21	0	0.0%	6.7%	0	0
22	0	0.0%	6.7%	0	0
23	0	0.0%	6.7%	0	0
24	0	0.0%	6.7%	0	0
25	3	10.0%	16.7%	75	1875
26	6	20.0%	36.7%	156	4056
27	4	13.3%	50.0%	108	2916
28	3	10.0%	60.0%	84	2352
29	4	13.3%	73.3%	116	3364
30	1	3.3%	76.7%	30	900
31	1	3.3%	80.0%	31	961
32	1	3.3%	83.3%	32	1024
33	3	10.0%	93.3%	99	3267
34	0	0.0%	93.3%	0	0
35	0	0.0%	93.3%	0	0
36	0	0.0%	93.3%	0	0
37	0	0.0%	93.3%	0	0
38	2	6.7%	100.0%	76	2888
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
	30	100.0%		847	24403

Mean Speed = 28.2 mph
 Standard Deviation = 4.1 mph
 Margin of Error (95% Confidence) = ± 1.5 mph

Median Speed = 28.2 mph
 15th Percentile Speed = 24.0 mph
 85th Percentile Speed = 32.5 mph

SPOT SPEED STUDY

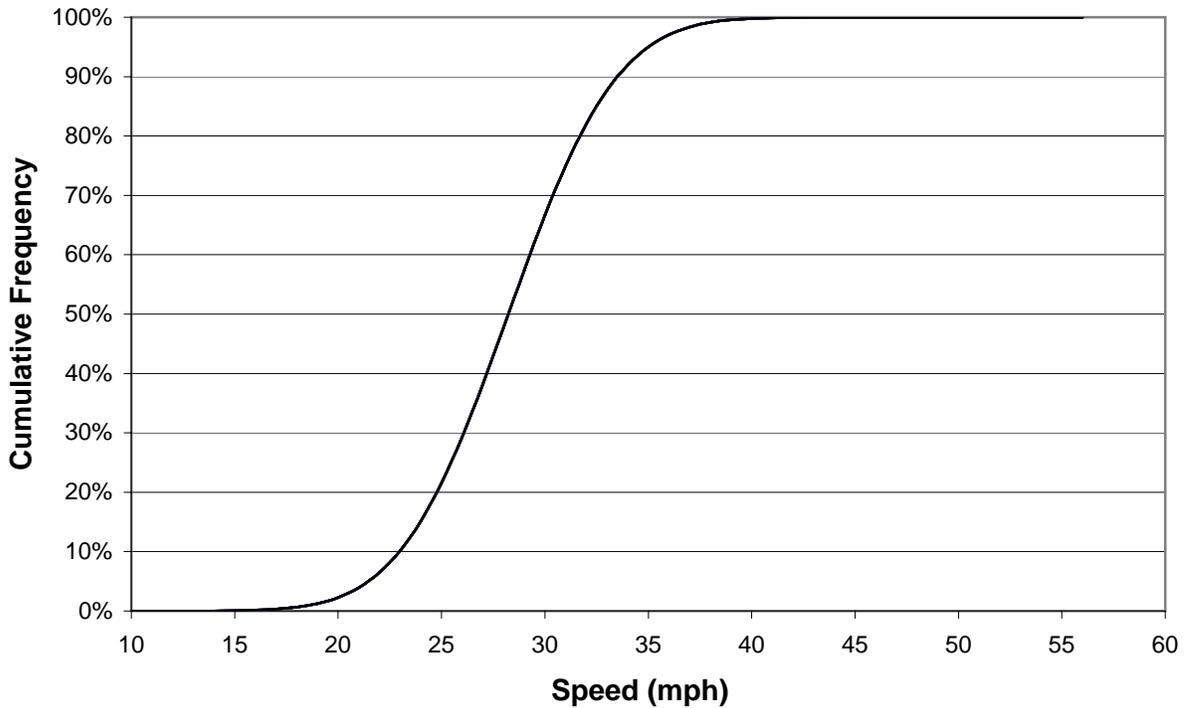
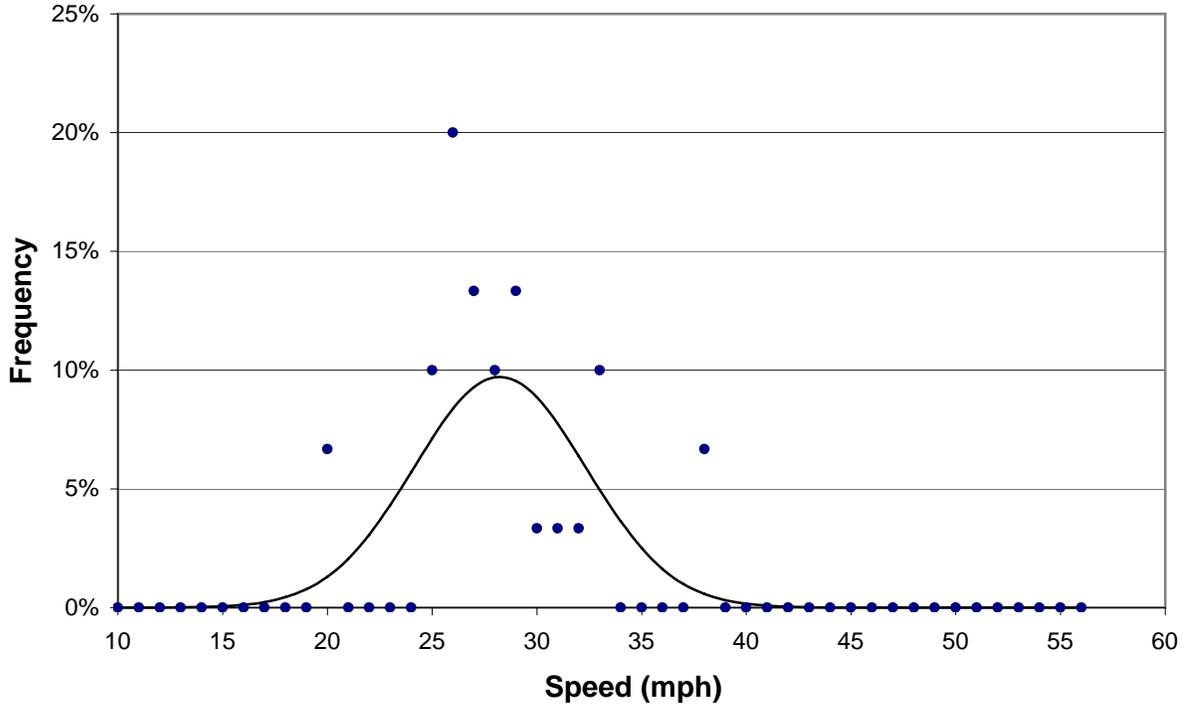
Date: **November 2, 2005**
 Location: **61 St between Grand Ave and Maspeth St**
 Surveyor: **Richard Calvache & Hugo Salinas**

Time: **1:15 PM**

School: **St. Stanislaus**
 Direction: **NB**
 Comments:

Mean Speed = 28.2 mph
 Standard Deviation = 4.1 mph
 Margin of Error (95% Confidence) = ± 1.5 mph

Median Speed = 28.2 mph
 15th Percentile Speed = 24.0 mph
 85th Percentile Speed = 32.5 mph



SPOT SPEED STUDY

Date: **November 2, 2005** Time: **1:15 PM**
 Location: **61 St between Grand Ave and Maspeth St**
 Surveyor: **Richard Calvache & Hugo Salinas**

School: **St. Stanislaus**
 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	0	0.0%	0.0%	0	0
20	0	0.0%	0.0%	0	0
21	0	0.0%	0.0%	0	0
22	0	0.0%	0.0%	0	0
23	4	21.1%	21.1%	92	2116
24	1	5.3%	26.3%	24	576
25	3	15.8%	42.1%	75	1875
26	3	15.8%	57.9%	78	2028
27	0	0.0%	57.9%	0	0
28	0	0.0%	57.9%	0	0
29	2	10.5%	68.4%	58	1682
30	3	15.8%	84.2%	90	2700
31	0	0.0%	84.2%	0	0
32	0	0.0%	84.2%	0	0
33	3	15.8%	100.0%	99	3267
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
	19	100.0%		516	14244

Mean Speed = 27.2 mph Median Speed = 27.2 mph
 Standard Deviation = 3.6 mph 15th Percentile Speed = 23.4 mph
 Margin of Error (95% Confidence) = ± 1.6 mph 85th Percentile Speed = 30.9 mph

SPOT SPEED STUDY

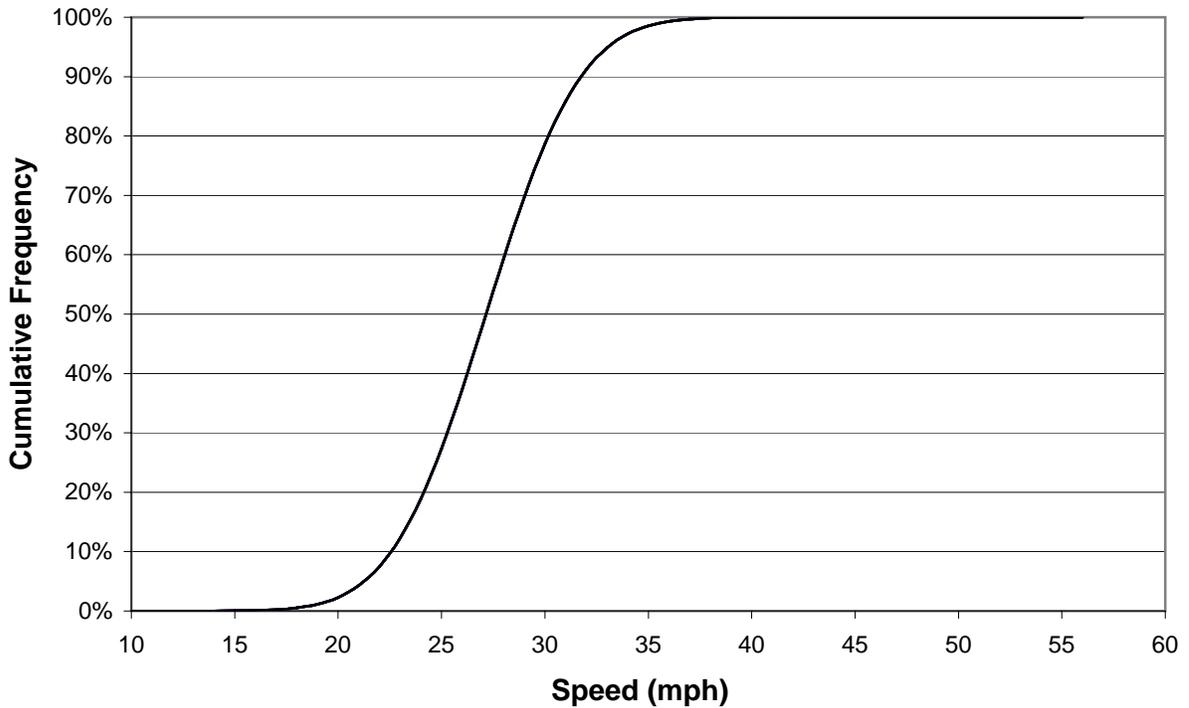
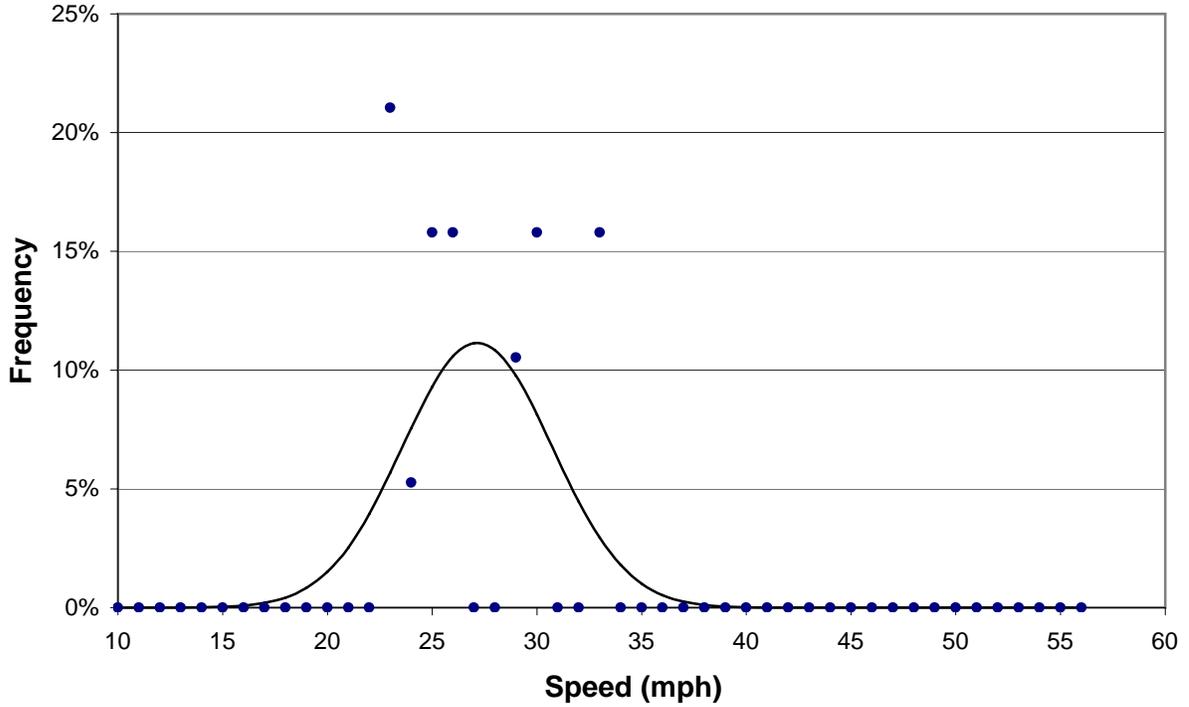
Date: **November 2, 2005**
Location: **61 St between Grand Ave and Maspeth St**
Surveyor: **Richard Calvache & Hugo Salinas**

Time: **1:15 PM**

School: **St. Stanislaus**
Direction: **SB**
Comments:

Mean Speed = 27.2 mph
Standard Deviation = 3.6 mph
Margin of Error (95% Confidence) = ± 1.6 mph

Median Speed = 27.2 mph
15th Percentile Speed = 23.4 mph
85th Percentile Speed = 30.9 mph



SPOT SPEED STUDY

Date: **November 2, 2005** Time: **12:10 PM**
 Location: **Grand Avenue between 61 St and 64 St**
 Surveyor: **Richard Calvache & Hugo Salinas**

School: **St. Stanislaus**
 Direction: **EB**
 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	0	0.0%	0.0%	0	0
21	0	0.0%	0.0%	0	0
22	0	0.0%	0.0%	0	0
23	0	0.0%	0.0%	0	0
24	2	4.2%	4.2%	48	1152
25	0	0.0%	4.2%	0	0
26	1	2.1%	6.3%	26	676
27	0	0.0%	6.3%	0	0
28	2	4.2%	10.4%	56	1568
29	7	14.6%	25.0%	203	5887
30	13	27.1%	52.1%	390	11700
31	4	8.3%	60.4%	124	3844
32	7	14.6%	75.0%	224	7168
33	3	6.3%	81.3%	99	3267
34	0	0.0%	81.3%	0	0
35	4	8.3%	89.6%	140	4900
36	0	0.0%	89.6%	0	0
37	0	0.0%	89.6%	0	0
38	2	4.2%	93.8%	76	2888
39	2	4.2%	97.9%	78	3042
40	0	0.0%	97.9%	0	0
41	1	2.1%	100.0%	41	1681
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
	48	100.0%		1505	47773

Mean Speed = 31.4 mph
 Standard Deviation = 3.5 mph
 Margin of Error (95% Confidence) = ± 1.0 mph

Median Speed = 31.4 mph
 15th Percentile Speed = 27.7 mph
 85th Percentile Speed = 35.0 mph

SPOT SPEED STUDY

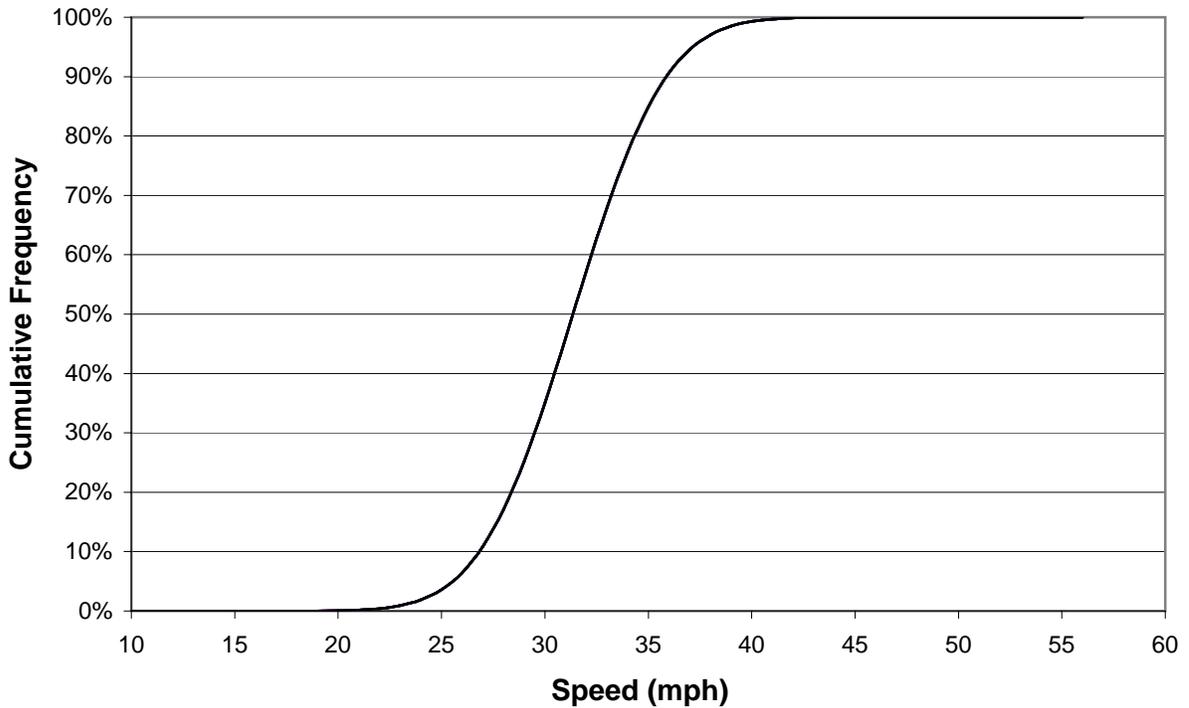
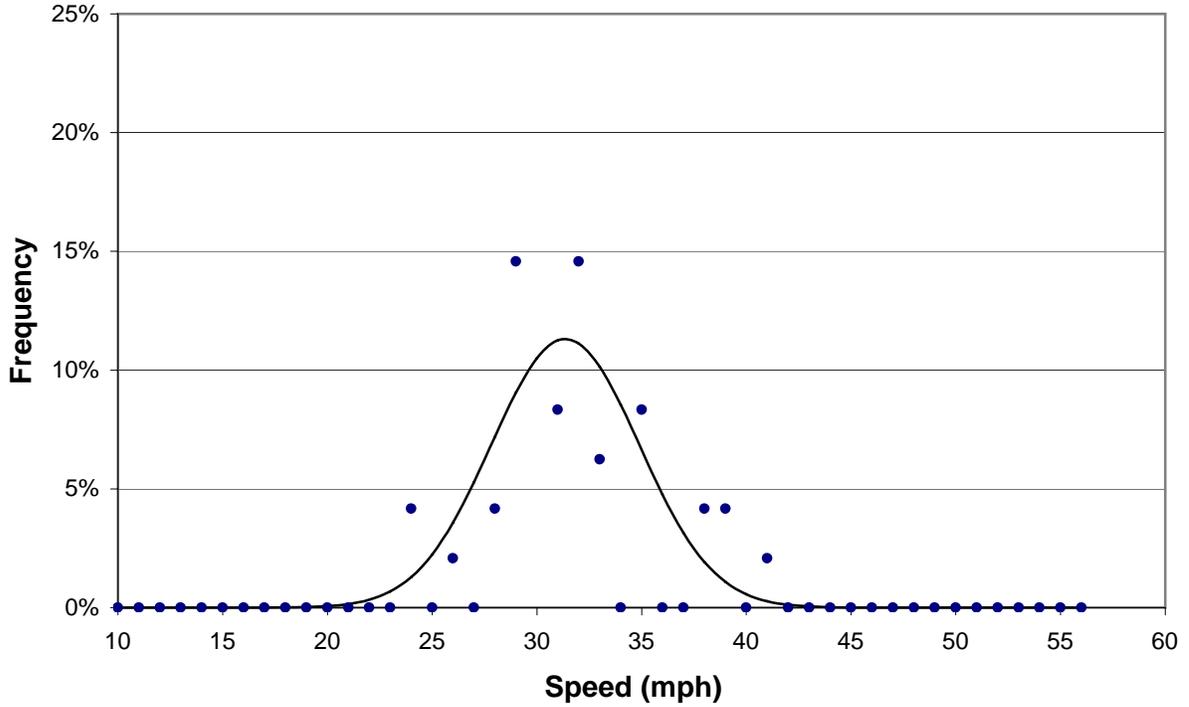
Date: **November 2, 2005**
 Location: **Grand Avenue between 61 St and 64 St**
 Surveyor: **Richard Calvache & Hugo Salinas**

Time: **12:10 PM**

School: **St. Stanislaus**
 Direction: **EB**
 Comments:

Mean Speed = 31.4 mph
 Standard Deviation = 3.5 mph
 Margin of Error (95% Confidence) = ± 1.0 mph

Median Speed = 31.4 mph
 15th Percentile Speed = 27.7 mph
 85th Percentile Speed = 35.0 mph



SPOT SPEED STUDY

Date: **November 2, 2005** Time: **12:10 PM**
 Location: **Grand Avenue between 61 St and 64 St**
 Surveyor: **Richard Calvache & Hugo Salinas**

School: **St. Stanislaus**
 Direction: **WB**
 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	0	0.0%	0.0%	0	0
21	0	0.0%	0.0%	0	0
22	0	0.0%	0.0%	0	0
23	0	0.0%	0.0%	0	0
24	0	0.0%	0.0%	0	0
25	0	0.0%	0.0%	0	0
26	0	0.0%	0.0%	0	0
27	4	7.1%	7.1%	108	2916
28	10	17.9%	25.0%	280	7840
29	0	0.0%	25.0%	0	0
30	7	12.5%	37.5%	210	6300
31	6	10.7%	48.2%	186	5766
32	4	7.1%	55.4%	128	4096
33	1	1.8%	57.1%	33	1089
34	7	12.5%	69.6%	238	8092
35	2	3.6%	73.2%	70	2450
36	3	5.4%	78.6%	108	3888
37	4	7.1%	85.7%	148	5476
38	3	5.4%	91.1%	114	4332
39	3	5.4%	96.4%	117	4563
40	1	1.8%	98.2%	40	1600
41	1	1.8%	100.0%	41	1681
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%		1821	60089

Mean Speed = 32.5 mph
 Standard Deviation = 4.0 mph
 Margin of Error (95% Confidence) = ± 1.0 mph

Median Speed = 32.5 mph
 15th Percentile Speed = 28.4 mph
 85th Percentile Speed = 36.6 mph

SPOT SPEED STUDY

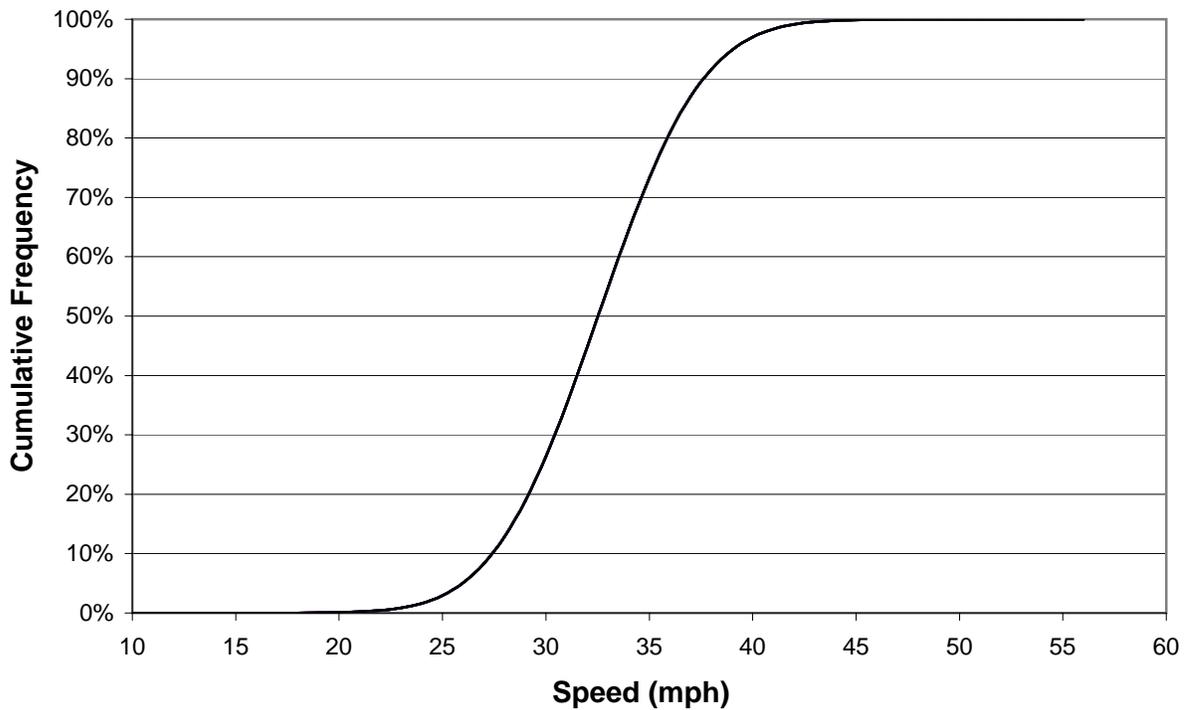
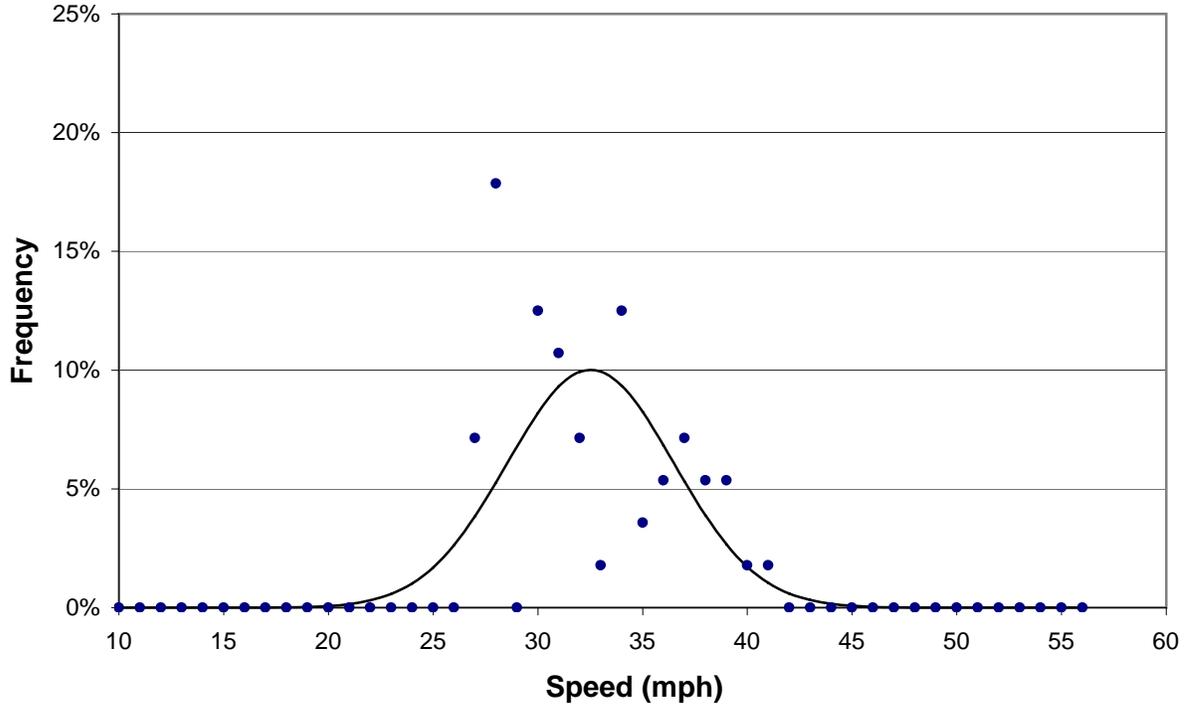
Date: **November 2, 2005**
 Location: **Grand Avenue between 61 St and 64 St**
 Surveyor: **Richard Calvache & Hugo Salinas**

Time: **12:10 PM**

School: **St. Stanislaus**
 Direction: **WB**
 Comments:

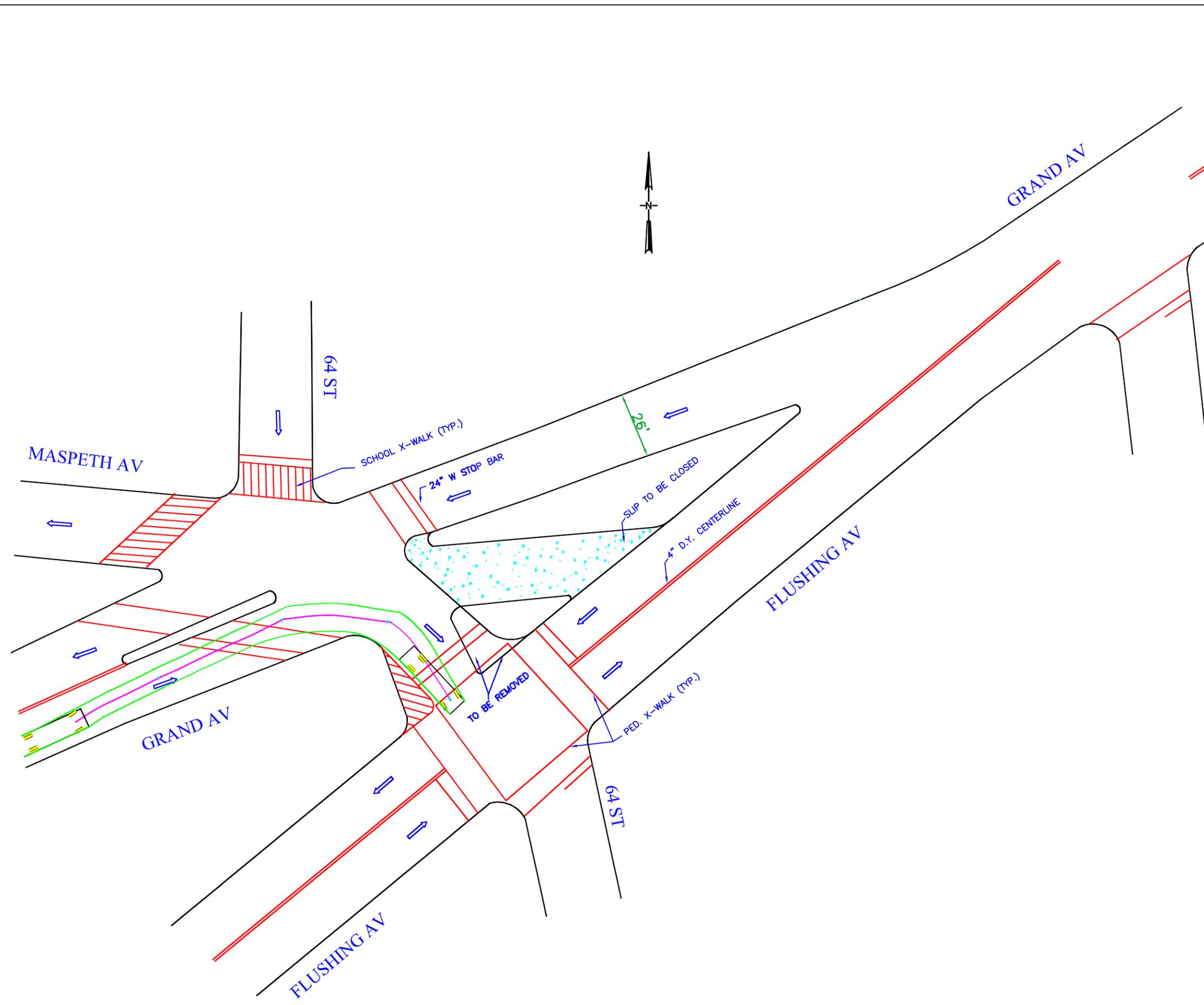
Mean Speed = 32.5 mph
 Standard Deviation = 4.0 mph
 Margin of Error (95% Confidence) = ± 1.0 mph

Median Speed = 32.5 mph
 15th Percentile Speed = 28.4 mph
 85th Percentile Speed = 36.6 mph



REVISIONS

DATE	BY	DESCRIPTION



CITY OF NEW YORK DEPARTMENT OF TRANSPORTATION
 BUREAU OF TRAFFIC OPERATIONS
 28-11 Queens Plaza North L.I.C., N.Y. 11101
 INTERSECTION OF GRAND AVE/FLUSHING AVE/64 ST/MASPETH AVE
 PAVEMENT MARKINGS DETAILS

APPROVED	Drawn by <u>M. Singh</u> Checked by <u>S. Barkho</u>	DRAWING
BY _____	Borough <u>Queens</u> Scale <u>1"=40'</u> Date <u>4/4/2006</u>	NO. <u>PROPOSAL</u>