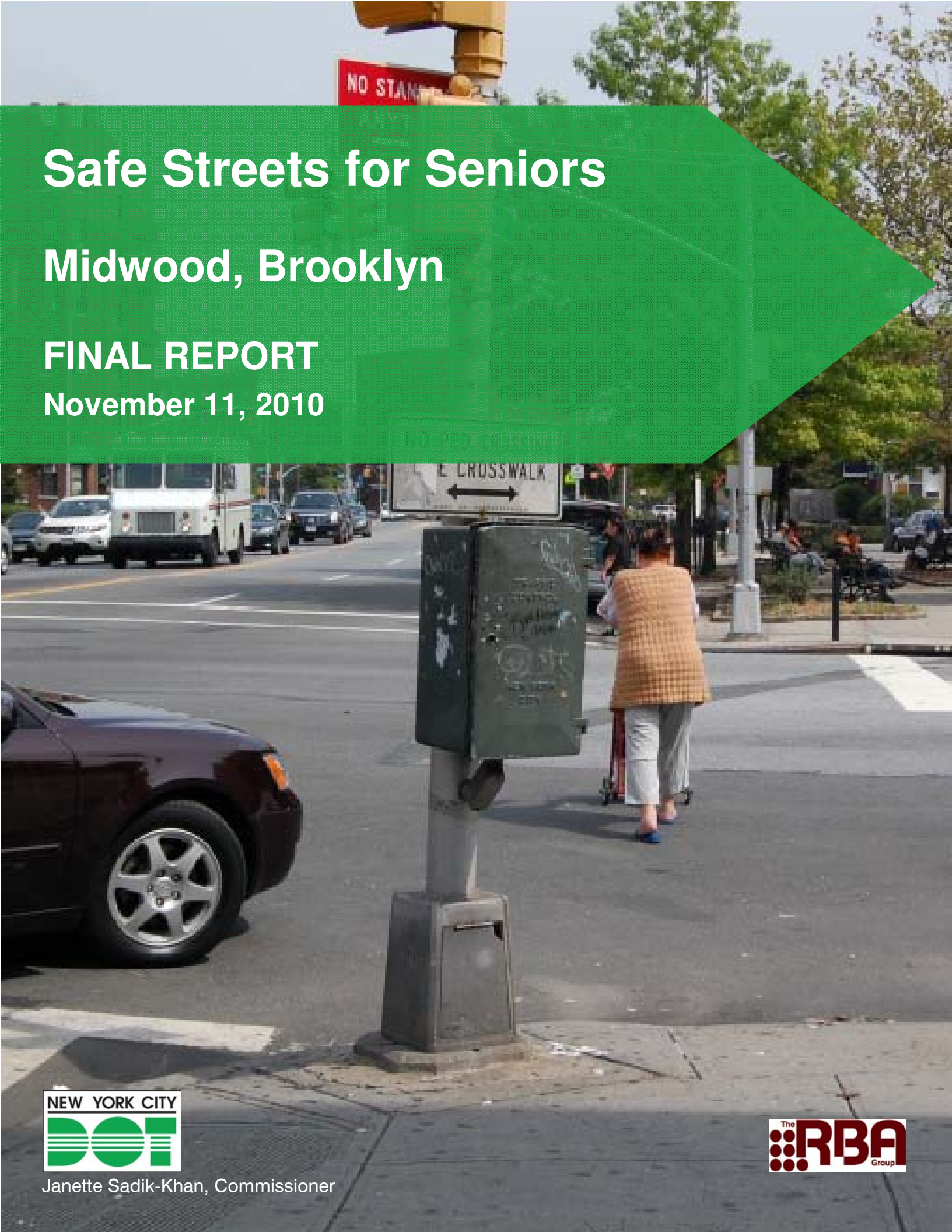
Safe Streets for Seniors

Midwood, Brooklyn

FINAL REPORT

November 11, 2010



NEW YORK CITY DOT

Janette Sadik-Khan, Commissioner

The RBA Group

Safe Streets for Seniors
Midwood, Brooklyn
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PROJECT DESCRIPTION

Since 1990 the number of pedestrian fatalities in New York City has decreased by 56%. Moreover, prior to 1950, pedestrians accounted for ¾ of all traffic fatalities and since then, the percentage has decreased to account for about ½ of all traffic fatalities. Despite these statistical improvements, pedestrians continue to be the largest at risk mode – with older adults more likely to suffer serious injuries or fatalities from traffic crashes than other pedestrians. The rate of pedestrian fatalities for every 100,000 persons in the City has decreased by nearly half since 1991 – to 2.0 from 3.8 – while the rate of senior pedestrian fatalities per 100,000 seniors has decreased even more sharply – to 6.6 from 13.1. Nevertheless, while seniors make up only 12% of the population in New York City, they still comprise 39% of pedestrian fatalities. The recognition of the disproportional representation of the senior population among severe pedestrian injuries and fatalities led to the development of the Department's Safe Streets for Seniors (SSS) Program.

The purpose of this project is to address senior pedestrian safety issues at twenty-five Senior Pedestrian Focus Areas (SPFAs) in the five boroughs of New York City and to develop and implement mitigation measures to improve the safety of seniors and other pedestrians within the 25 SPFAs. DOT identified SPFAs to include the top senior pedestrian crash (severe injury and fatality) areas within each borough. Four of the SPFAs are located in the Bronx, seven in Brooklyn, five in Queens, eight in Manhattan and one in Staten Island. The SPFAs have been selected based on the density of senior pedestrian crashes resulting in fatalities or severe injuries in a five-year period. DOT conducted in-house studies for five pilot SPFAs and is utilizing consultant services to perform a comprehensive study of pedestrian safety conditions at intersections and along corridors within twenty selected SPFAs.

The project evaluates the crash history and existing traffic conditions and controls (e.g., roadway geometry, signal timing) at selected intersections and corridors within each SPFA in order to develop short- and long-term measures to reduce pedestrian crashes specifically for seniors, and improve safety and traffic operations for all users. The consultant makes specific safety recommendations consisting of low-cost as well as capital engineering and design improvements for these twenty areas. In addition, the consultant conducts data analysis as needed, prepares engineering and design schematics and related services, as necessary, for capital improvements.

Background

BACKGROUND

Land-use in the Midwood Study Area is a mix of commercial and residential buildings. A senior center, Council Center for Senior Citizens, is located at 1001 Quentin Road, between East 10th Street and Coney Island Avenue.

A medical center, New York Community Hospital, is located just northeast of the study area at Avenue O and Kings Highway.

There are nine schools in the vicinity of study area and the following four are in the study area:

- Yeshivat Ateret Torah at 901 Quentin Road between East 9th Street and East 10th Street
- Congregation Etz Chaim on 1649 East 13th Street between Avenue P and Kings Highway
- Bnos Israel East Flatbush School for Girls at 1629 East 15th Street between Avenue P and Kings Highway
- Congregation Beth Isaac at 1719 Avenue P between East 17th Street and East 18th Street

There is a college, Touro College, on Kings Highway and East 18th Street and several synagogues also in the study area.

There are two pedestrian plazas:

- Corporal Willshire Plaza: Kings Highway between Ocean Avenue and East 21st Street
- Sgt. Joyce Kilmer Square: Intersection of Kings Highway and East 12th Street

Kings Highway and Coney Island Avenue are designated local truck routes (Exhibit 3) and a bike route is proposed along Avenue P (Exhibit 2).

Transit access in this area includes the B and Q Subway lines. A subway station for the B and Q lines is located on Kings Highway between East 15th Street and East 16th Street. There are also several bus stops at this location making it a busy intersection with high vehicular and pedestrian volume (Exhibit 4). Bus routes operating in the vicinity of Midwood Study Area are: B2, B7, B31, B82, B100, B68, Bx29 and B49.

EXHIBIT 1 – AREA MAP

EXHIBIT 2 – BIKE MAP

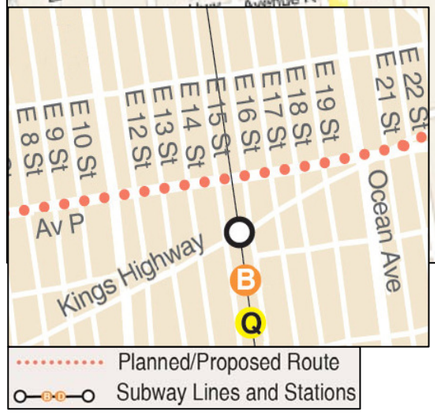


EXHIBIT 3– TRUCK MAP

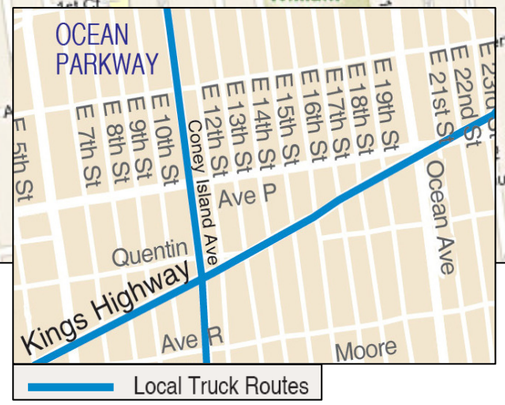


EXHIBIT 4– TRANSIT MAP

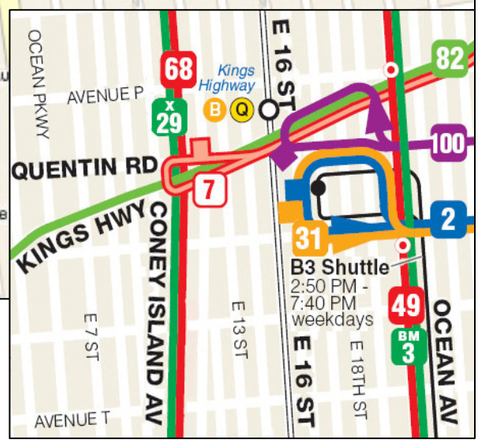
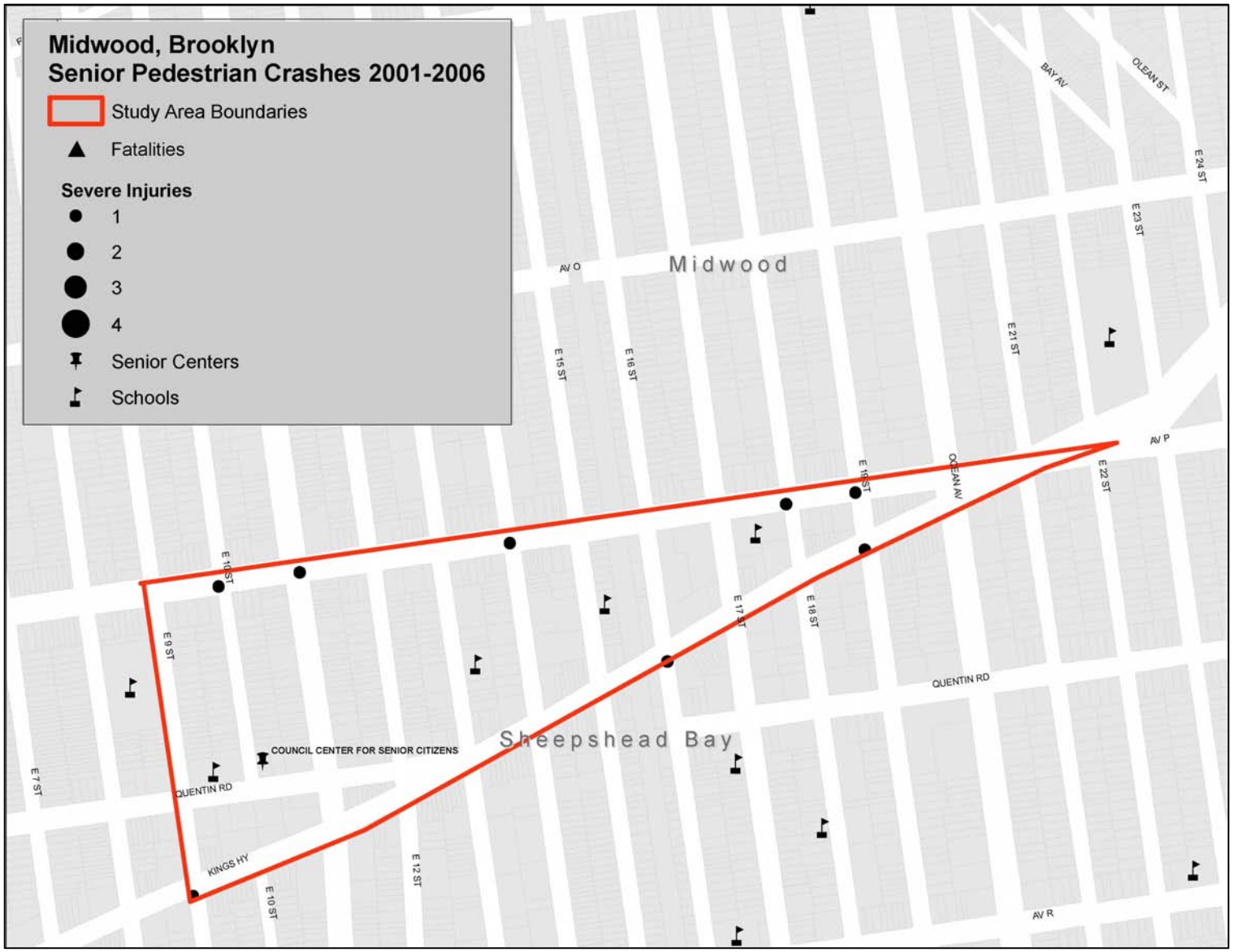


EXHIBIT 5 – PEDESTRIAN CRASH STATISTICS (2001-2005)



EXISTING CONDITIONS

The Midwood Study Area consists of two major east-west corridors, Kings Highway and Avenue P, and two major north-south corridors, Coney Island Avenue and Ocean Avenue. Ten local streets, from East 9th Street to Ocean Avenue, connect Kings Highway and Avenue P.

There were five senior pedestrian crashes along Avenue P and three along Kings Highway from 2001 to 2006.

Coney Island Avenue, Ocean Avenue, Avenue P and Kings Highway are multi-lane roadways with two-way traffic. The existing geometry of Avenue P includes four moving lanes, two in each direction, with parking lanes on each side. Kings Highway includes two moving lanes, one in each direction, with parking lanes on each side. Coney Island Avenue and Ocean Avenue have four moving lanes, two northbound and two southbound, with parking lanes in each direction (Photo No. 1). The combination of operational and geometric factors makes these corridors difficult for senior pedestrians to safely cross.

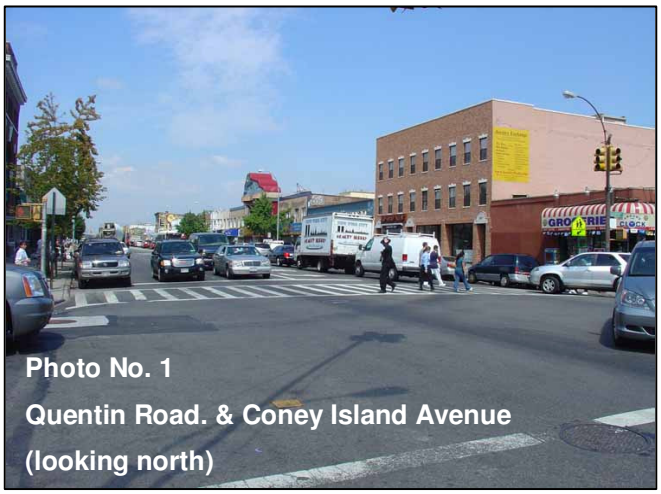


Photo No. 1
Quentin Road. & Coney Island Avenue
(looking north)

There were numerous issues that were repeatedly observed during our field visits and/or conveyed by senior pedestrians during interviews. Those issues are listed here:

- Insufficient crossing time
- Missing or non-standard ADA pedestrian ramps
- Missing crosswalk striping

Prior to this study, the first phase of the School Safety Engineering Project, a NYCDOT initiative to improve pedestrian safety in the immediate vicinity of elementary and middle schools citywide, was completed in 2007. This study reviewed some of the same intersections that are in the current study area and developed recommendations to improve pedestrian safety for students that are applicable to senior pedestrian safety. The recommendations developed under the school safety project have been shown in the section "Illustrating the Solution" of this report. The school in this project area studied under the school safety-engineering project was Yeshiva Ateret Torah School.

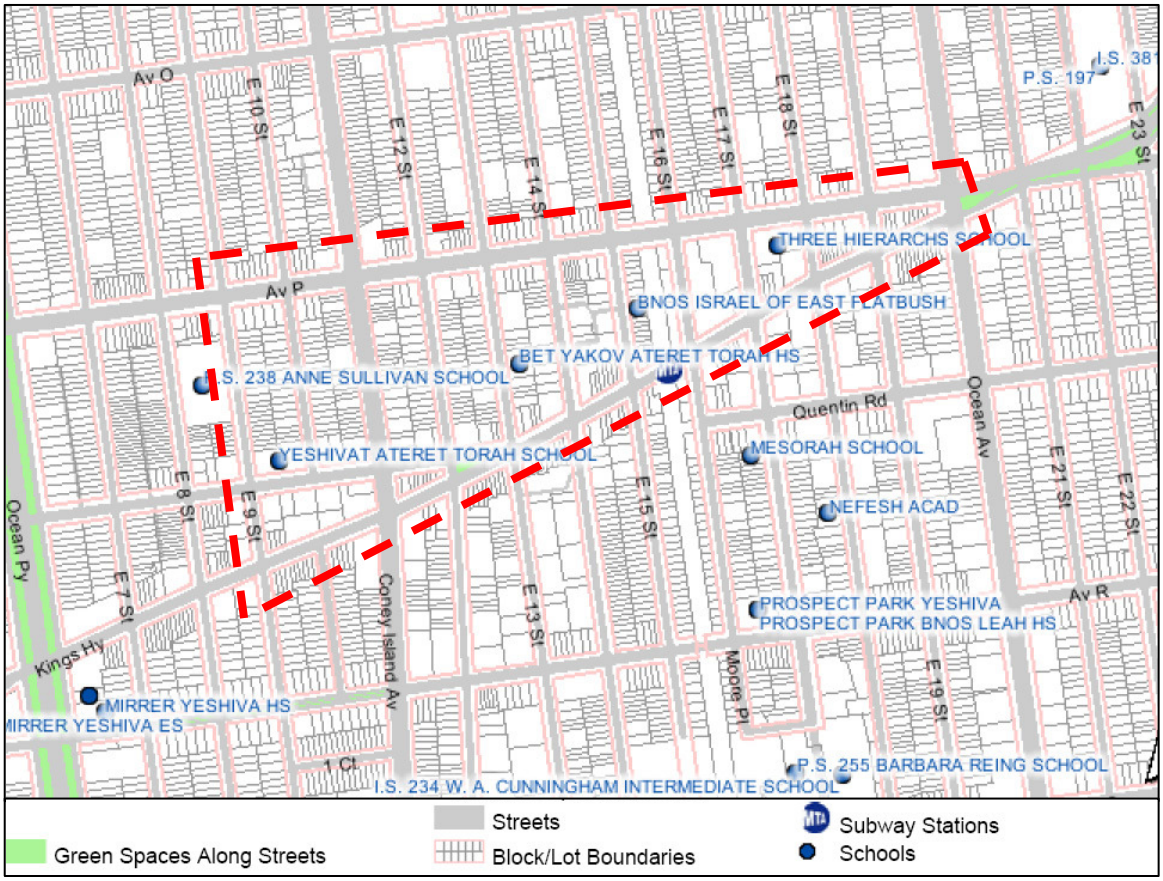


EXHIBIT 6: PUBLIC AND PRIVATE SCHOOLS

The full copy of the priority school report is available at the NYCDOT's website at http://www.nyc.gov/html/dot/html/safety/saferoutes.shtml. A copy of the proposed recommendation map from this report has been included in Appendix F for reference.

Avenue P

Avenue P is a major east-west corridor. It is a 60-foot wide roadway with two moving lanes in each direction and parking on both sides.

Most streets that intersect with Avenue P are in need new pedestrian ramps or have pedestrian ramps that need to be replaced with a NYCDOT standard pedestrian ramps and ADA safety surface.

Many of the senior residents interviewed, indicated that there was not enough time to cross Avenue P. Neckdowns are recommended for the following intersections to shorten the crossing distance for pedestrians:

- Northwest corner of Avenue P and East 9th Street
- Northwest and Southeast corner of Avenue P and Coney Island Avenue

Some of these corners have an existing apex catch basin. It will be necessary to relocate these catch basins in order to build the neckdowns.

Coney Island Avenue is a 70-foot wide roadway. There are two moving lanes in each direction with a striped median or a left-turn bay and parking on both sides. The intersection of Coney Island Avenue and Avenue P has heavy vehicular and pedestrian volumes with an exclusive left turn lane for northbound and southbound traffic. A new oversized Coney Island Avenue sign is recommended to be hung over Avenue P for westbound and eastbound traffic. The oversized sign will allow motorists to determine their location so they can concentrate on the traffic/pedestrian conditions.

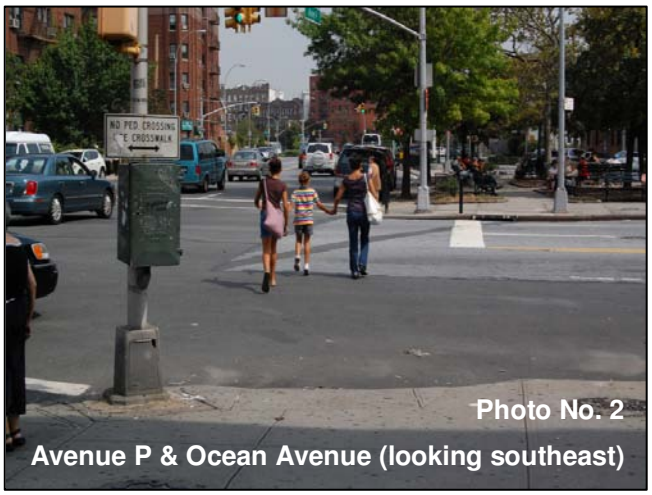


Photo No. 2
Avenue P & Ocean Avenue (looking southeast)

There is heavy vehicular traffic along Avenue P at East 18th Street and a senior pedestrian was injured at this intersection. To increase the visibility of the crosswalks and driver awareness, high visibility crosswalks are recommended for the north, west and east legs of the intersection.

The south leg of Avenue P and Ocean Avenue does not have a crosswalk; however pedestrians are crossing this location regularly (Photo No. 2). A standard crosswalk is recommended for the south leg of this intersection to increase the visibility of pedestrians crossing and driver awareness. In addition, neckdowns are recommended on the southwest and southeast corner to shorten the crossing distance on Avenue P. Many pedestrians observed had trouble completing this crossing due to heavy vehicle volumes. These neckdowns will also help to slow turning vehicles.

Quentin Road


Quentin Road & East 9th Street
(southwest corner)
Photo No. 3

Within the study area, Quentin Road is a 43-foot wide roadway with one moving lane in each direction from East 9th Street to East 12th Street with parking on both sides. It is a westbound corridor with one moving lane from East 12th Street to East 13th Street where it meets Kings Highway.

The pedestrian ramp on the southwest corner of East 9th Street should be replaced with a NYCDOT standard pedestrian ramp and ADA safety surface (Photo No. 3).

The intersection of Quentin Road and East 10th Street is a T-intersection and the Council Center for Senior Citizens is located at the northeast corner. A curb extension is recommended along the south side of Quentin Road to shorten the crossing distance for seniors. There is a catch basin that should be relocated in order to build the curb extension.

At the intersection of Quentin Road and East 12th Street, there is no pedestrian ramp on the southeast corner. A new one is recommended so pedestrians can cross Quentin Road.

Kings Highway

In the study area, Kings Highway is a major commercial corridor. It is a 43-foot wide roadway with one moving lane in each direction with parking on both sides (Photo No. 4). Kings Highway is lined with commercial stores and delivery trucks are constantly double-parked, making it difficult for the drivers as well as pedestrians to operate safely.


Photo No. 4
Kings Highway & East 9th Street
(northwest corner)

The pedestrian ramp on the southeast corner of Kings Highway and East 9th Street along Kings Highway should be replaced with a NYCDOT standard pedestrian ramp and ADA safety surface.

A new Kings Highway sign is recommended to be hung over Coney Island Avenue for northbound and southbound traffic. The oversized sign will allow motorists to determine their location so they can concentrate

on the traffic/pedestrian conditions.

High visibility crosswalks are recommended at the following intersections to increase the visibility and driver awareness:

- all four legs of East 12th Street and Kings Highway
- all four legs of East 13th Street and Kings Highway
- all four legs of East 14th Street and Kings Highway
- the north and south legs of East 18th Street and Kings Highway

Pedestrian ramps on the southwest and southeast corners of East 15th Street along Kings Highway should be replaced with a NYCDOT standard pedestrian ramps and ADA safety surface.

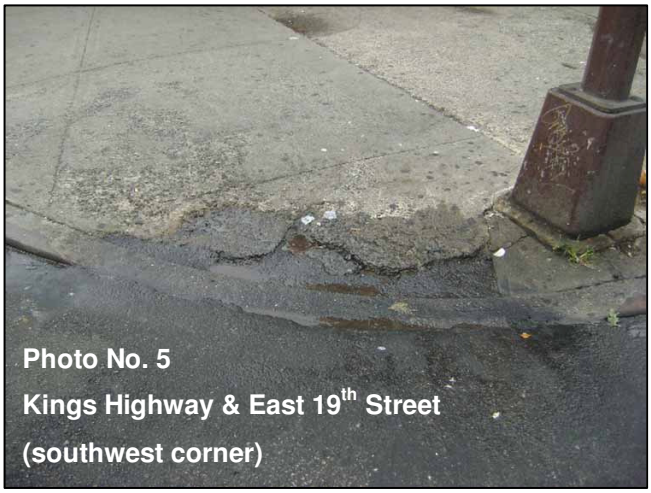


Photo No. 5
Kings Highway & East 19th Street
(southwest corner)

Both pedestrian ramps on the southeast corner of East 16th Street are in poor condition and should be replaced with new ones.

The northwest and southeast corners of East 17th Street have pedestrian ramps that should be replaced with a NYCDOT standard pedestrian ramps and ADA safety surface.

A new pedestrian ramp is recommended for the southwest corner of East 19th Street for pedestrians crossing Kings Highway (Photo No. 5).

INDEX

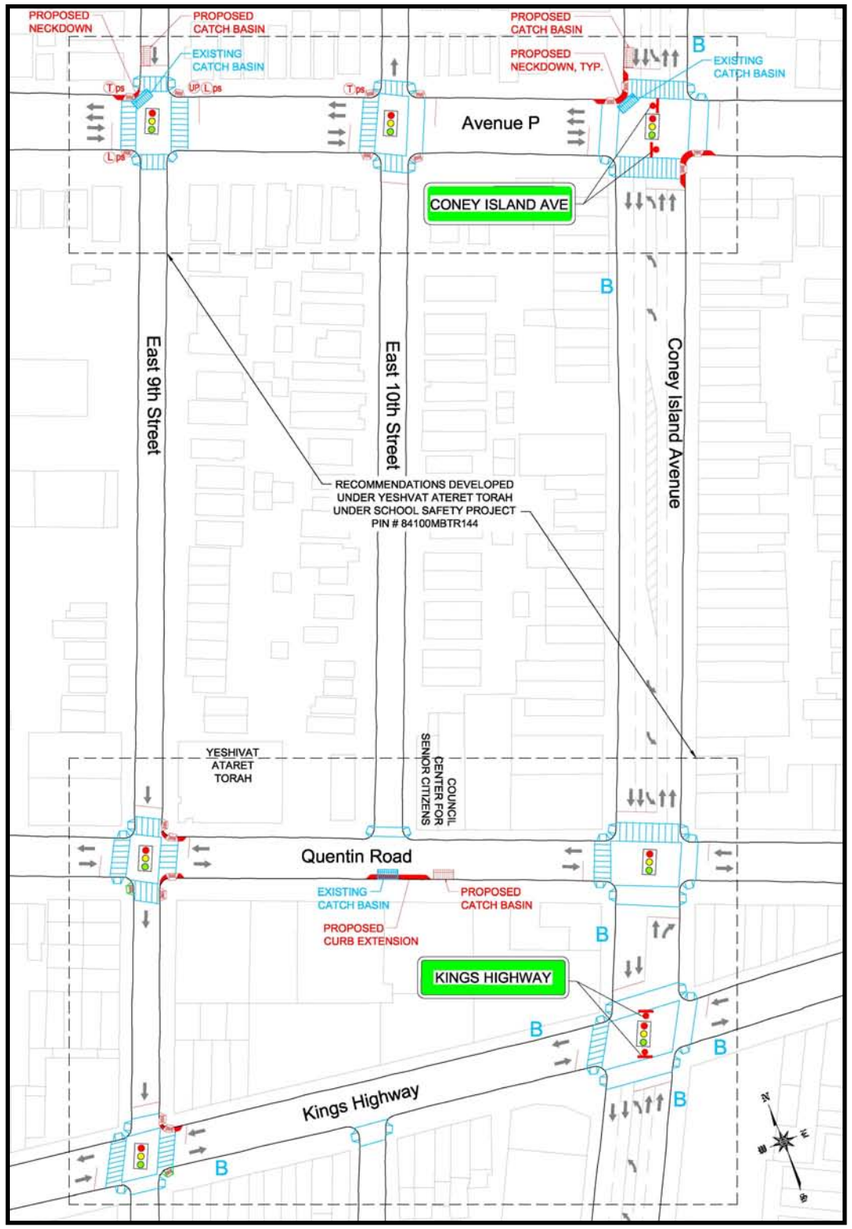
LEGEND

- EXISTING TRAVEL DIRECTION
- EXISTING SIGNALIZED INTERSECTION
- EXISTING SCHOOL CROSSWALK
- EXISTING HIGH VISIBILITY CROSSWALK
- EXISTING STANDARD CROSSWALK
- EXISTING PEDESTRIAN RAMP
- EXISTING CATCH BASIN
- EXISTING TRAFFIC SIGN
- S SUBWAY STOP
- B BUS STOP
- PROPOSED STOP BAR
- PROPOSED SCHOOL CROSSWALK
- PROPOSED HIGH VISIBILITY CROSSWALK
- PROPOSED STANDARD CROSSWALK
- PROPOSED NEW PEDESTRIAN RAMP
- REPLACE EXISTING PEDESTRIAN RAMP
- PROPOSED CATCH BASIN
- PROPOSED TRAFFIC SIGN
- PROPOSED CURB EXTENSION (NECKDOWN)
- PROPOSED SIGNALIZED INTERSECTION
- LPI PROPOSED LPI
- T SW OBSTRUCTION: SIGNAL POLE
- L SW OBSTRUCTION: STREET LIGHT

Illustrating the Solution

Illustrating the Solution

SITE 1: AVENUE P & KINGS HIGHWAY (FROM EAST 9TH STREET TO CONEY ISLAND AVE.)



Pedestrian concerns in this area are:

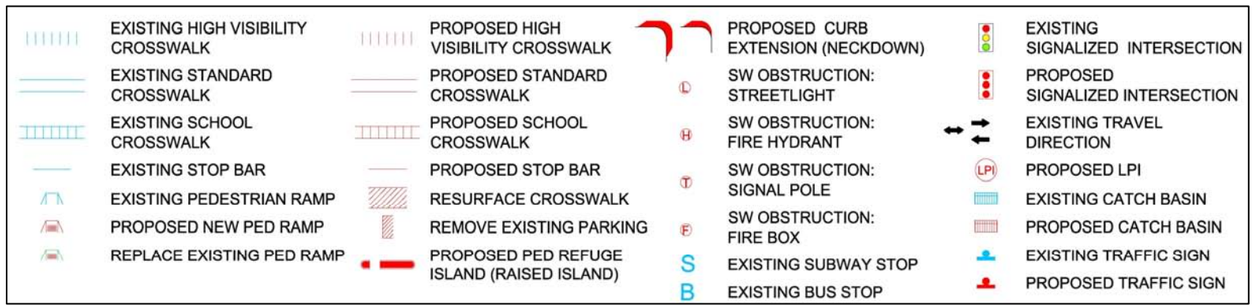
- Signal timing (insufficient crossing time)
- Missing or inadequate pedestrian ramps

Recommended improvements include:

- Time all signals for seniors and where feasible, the crossing time will be extended
- Install new advanced stop bars
- Install a neckdown
  -on the northwest corner of Avenue P & East 9th Street
  -on the northwest & southeast corner of Avenue P & Coney Island Avenue
  -along the south side of Quentin Road at East 10th Street
- Relocate catch basins
  -on the northwest corner of Avenue P & East 9th Street and Avenue P & Coney Island Avenue
  -on the south side of Quentin Road at East 10th Street
- Install new signs
  -oversized Coney Island Ave sign to be hung over Avenue P
  -oversized Kings Highway sign to be hung over Coney Island Avenue

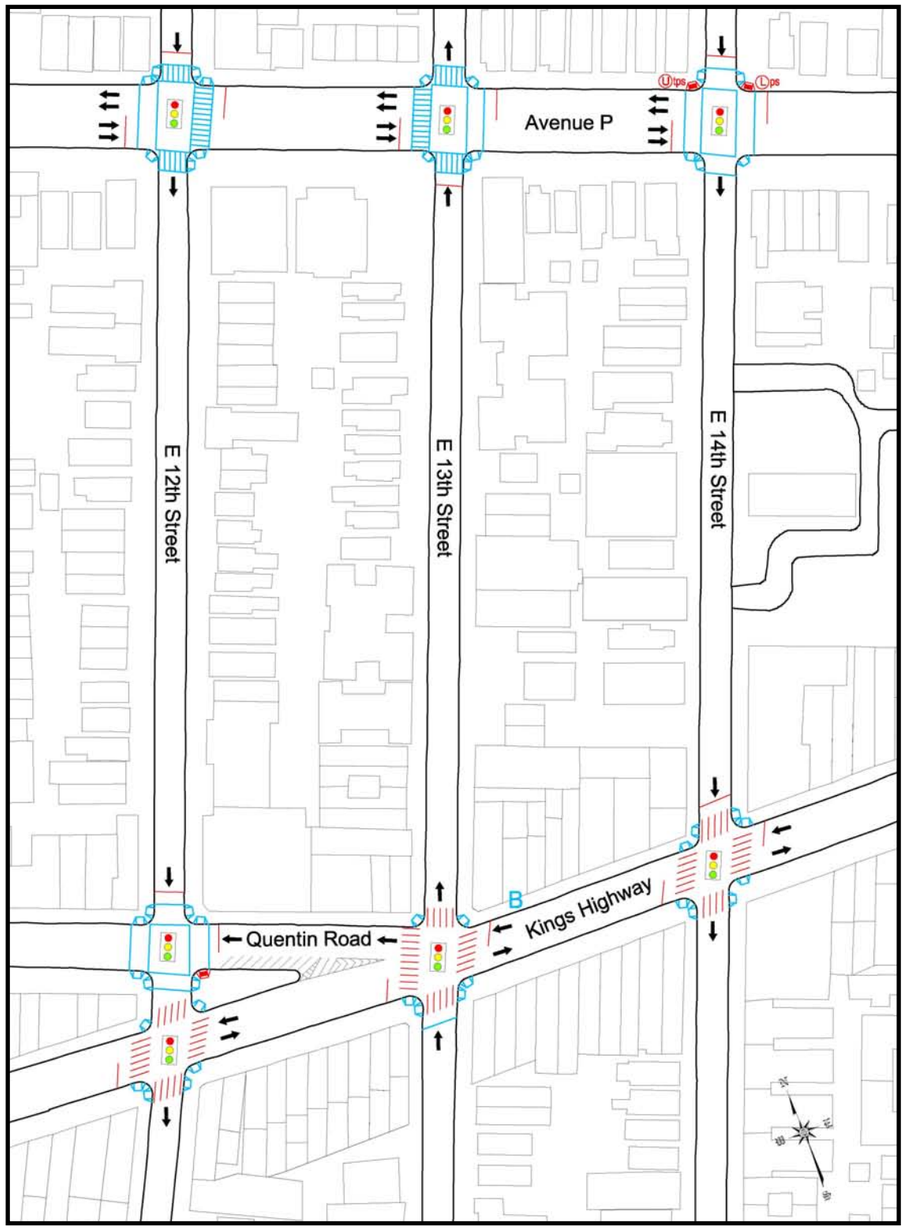
Additional Information:

- Parking regulations for the project area have been collected and are shown in Appendix B
- Details of neckdown construction are shown in Appendix D
- Recommendations developed for Yeshivat Ateret Torah are shown in Appendix E
- This study area was visited on September 2, 2008 and July 27, 2009



Illustrating the Solution

SITE 2: AVENUE P & KINGS HIGHWAY (FROM EAST 12TH STREET TO EAST 14TH STREET)



Pedestrian concerns in this area are:

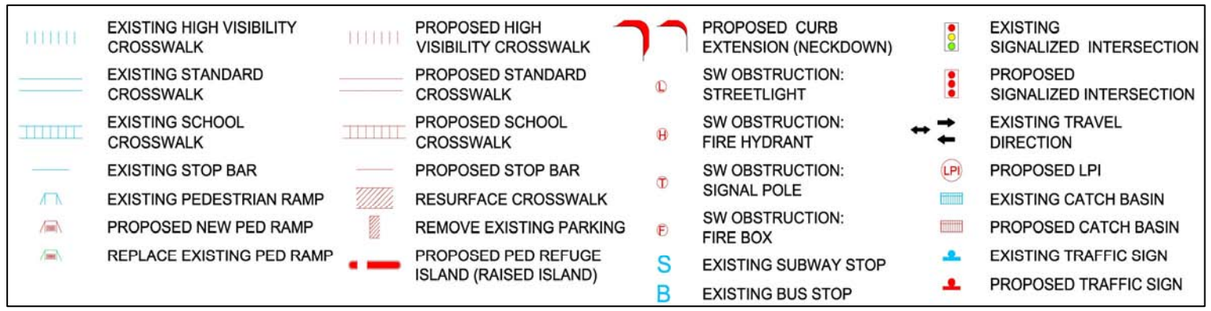
- Signal timing (insufficient crossing time)
- Missing or inadequate pedestrian ramps
- Poor drainage & ponding

Recommended improvements include:

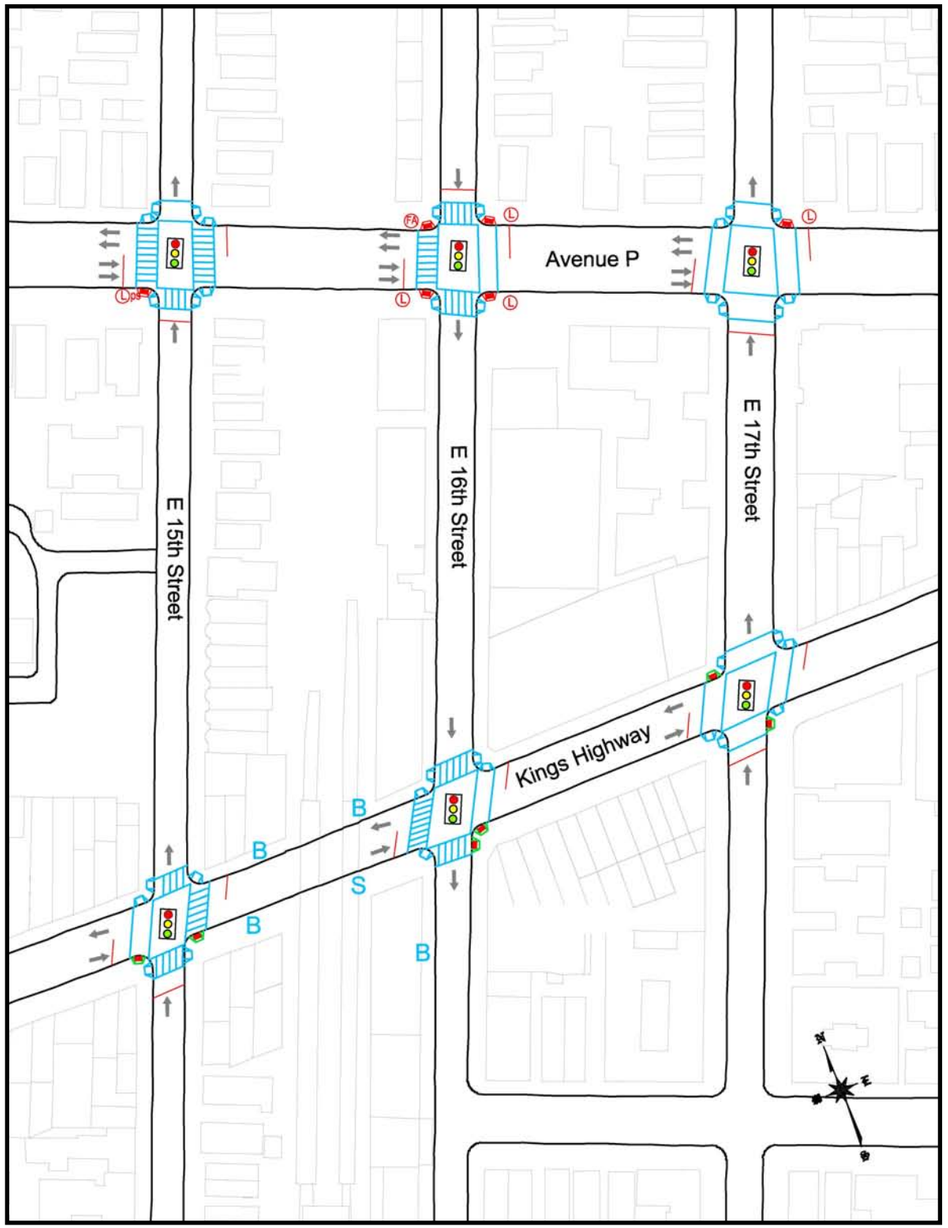
- Time all signals for seniors and where feasible, the crossing time will be extended
- Stripe new high-visibility crosswalks
  -all four legs of East 12th St. & Kings Highway
  -all four legs of East 13th St. & Kings Highway
  -all four legs of East 14th St. & Kings Highway
- Install new advanced stop bars

Additional Information:

- Parking regulations for the project area have been collected and are shown in Appendix B
- Details of neckdown construction are shown in Appendix D
- This study area was visited on September 2, 2008 and July 27, 2009



SITE 3: AVENUE P & KINGS HIGHWAY (FROM EAST 15TH STREET TO EAST 17TH STREET)



Pedestrian concerns in this area are:

- Signal timing (insufficient crossing time)
- Missing or inadequate pedestrian ramps

Recommended improvements include:

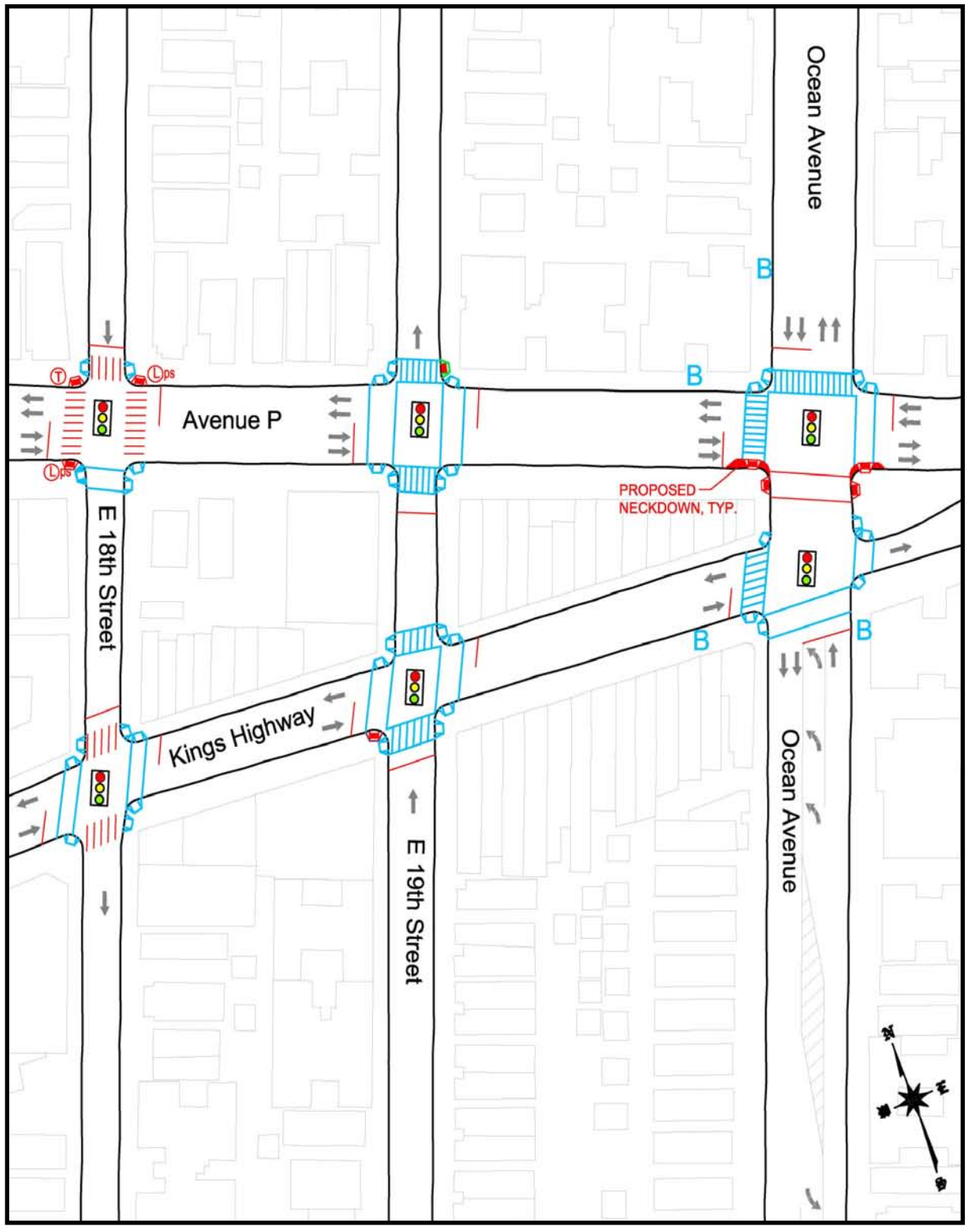
- Time all signals for seniors and where feasible, the crossing time will be extended
- Install new advanced stop bars

Additional Information:

- Parking regulations for the project area have been collected and are shown in Appendix B
- This study area was visited on September 2, 2008 and July 27, 2009

EXISTING HIGH VISIBILITY CROSSWALK	PROPOSED HIGH VISIBILITY CROSSWALK	PROPOSED CURB EXTENSION (NECKDOWN)	EXISTING SIGNALIZED INTERSECTION
EXISTING STANDARD CROSSWALK	PROPOSED STANDARD CROSSWALK	SW OBSTRUCTION: STREETLIGHT	PROPOSED SIGNALIZED INTERSECTION
EXISTING SCHOOL CROSSWALK	PROPOSED SCHOOL CROSSWALK	SW OBSTRUCTION: FIRE HYDRANT	EXISTING TRAVEL DIRECTION
EXISTING STOP BAR	PROPOSED STOP BAR	SW OBSTRUCTION: SIGNAL POLE	PROPOSED LPI
EXISTING PEDESTRIAN RAMP	RESURFACE CROSSWALK	SW OBSTRUCTION: FIRE BOX	EXISTING CATCH BASIN
PROPOSED NEW PED RAMP	REMOVE EXISTING PARKING	EXISTING SUBWAY STOP	PROPOSED CATCH BASIN
REPLACE EXISTING PED RAMP	PROPOSED PED REFUGE ISLAND (RAISED ISLAND)	EXISTING BUS STOP	EXISTING TRAFFIC SIGN
			PROPOSED TRAFFIC SIGN

SITE 4: AVENUE P & KINGS HIGHWAY (FROM EAST 18TH STREET TO OCEAN AVENUE)



Pedestrian concerns in this area are:

- Signal timing (insufficient crossing time)
- Missing or inadequate pedestrian ramps

Recommended improvements include:

- Time all signals for seniors and where feasible, the crossing time will be extended
- Stripe new high-visibility crosswalks
  -north, west and east legs of East 18th St. & Avenue P
  -north and south legs of East 18th St. & Kings Highway
- Install new advanced stop bars
- Install a neckdown
  -on the southwest & southeast corners of Avenue P & Ocean Ave.

Additional Information:

- Parking regulations for the project area have been collected and are shown in Appendix B
- Details of neckdown construction are shown in Appendix D
- This study area was visited on September 2, 2008 and July 27, 2009

EXISTING HIGH VISIBILITY CROSSWALK
EXISTING STANDARD CROSSWALK
EXISTING SCHOOL CROSSWALK
EXISTING STOP BAR
EXISTING PEDESTRIAN RAMP
PROPOSED NEW PED RAMP
REPLACE EXISTING PED RAMP
PROPOSED HIGH VISIBILITY CROSSWALK
PROPOSED STANDARD CROSSWALK
PROPOSED SCHOOL CROSSWALK
PROPOSED STOP BAR
RESURFACE CROSSWALK
REMOVE EXISTING PARKING
PROPOSED PED REFUGE ISLAND (RAISED ISLAND)
PROPOSED CURB EXTENSION (NECKDOWN)
SW OBSTRUCTION: STREETLIGHT
SW OBSTRUCTION: FIRE HYDRANT
SW OBSTRUCTION: SIGNAL POLE
SW OBSTRUCTION: FIRE BOX
EXISTING SUBWAY STOP
EXISTING BUS STOP
EXISTING SIGNALIZED INTERSECTION
PROPOSED SIGNALIZED INTERSECTION
EXISTING TRAVEL DIRECTION
PROPOSED LPI
EXISTING CATCH BASIN
PROPOSED CATCH BASIN
EXISTING TRAFFIC SIGN
PROPOSED TRAFFIC SIGN

Illustrating the Solution

APPENDIX A:
PHOTO LOG
(SEPARATE COVER)

APPENDIX B:
MAP OF PROPOSED CHANGES


Avenue P
Kings Highway
Quentin Road
Ocean Avenue
East 9th Street
East 10th Street
Coney Island Avenue
E 12th Street
E 13th Street
E 14th Street
E 15th Street
E 16th Street
E 17th Street
E 18th Street
E 19th Street
CONEY ISLAND AVE
KINGS HIGHWAY
RECOMMENDATIONS DEVELOPED UNDER YESHIVAT ATERET TORAH UNDER SCHOOL SAFETY PROJECT P.N.# 84100MBTR144
YESHIVAT ATARET TORAH
LEGEND
EXISTING TRAVEL DIRECTION
EXISTING SIGNALIZED INTERSECTION
EXISTING SCHOOL CROSSWALK
EXISTING HIGH VISIBILITY CROSSWALK
EXISTING STANDARD CROSSWALK
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PROPOSED CURB EXTENSION (NECKDOWN)
PROPOSED SIGNALIZED INTERSECTION
PROPOSED LPI
SW OBSTRUCTION: SIGNAL POLE
SW OBSTRUCTION: STREET LIGHT
The RBA Group
ENGINEERS • ARCHITECTS • PLANNERS
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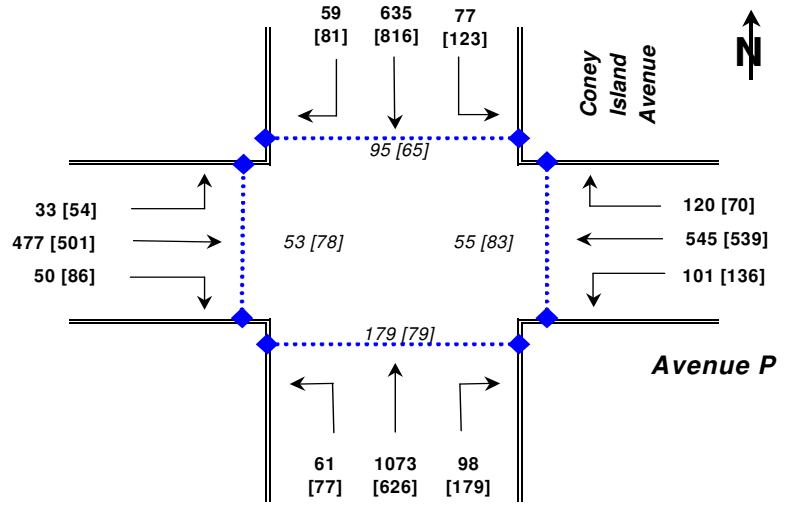
New York, New York 10003-3366
(211) 741-8090 Fax (212) 633-1206
SENIOR PEDESTRIAN SAFETY AREA
MIDWOOD
PROPOSED MEASURES TO IMPROVE SAFETY

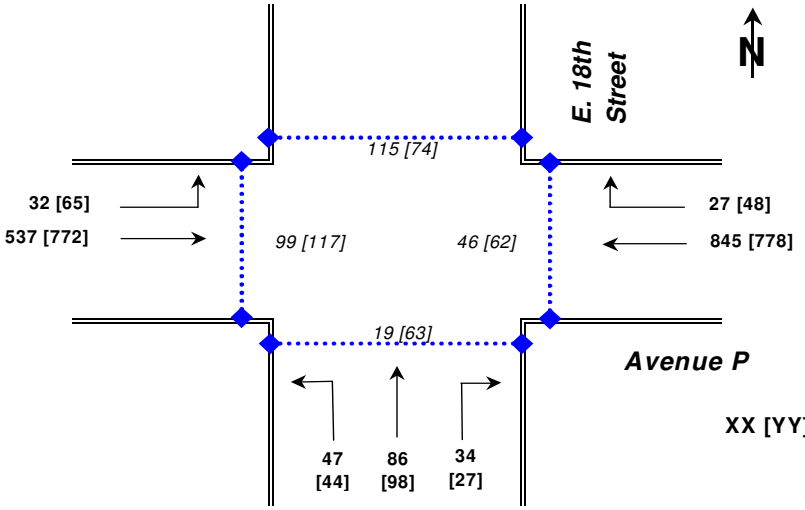
APPENDIX C:
TRAFFIC COUNTS

APPENDIX C – TRAFFIC COUNT

One Hour Traffic Count Volumes



Intersection of Avenue P and Coney Island Avenue (11/18/08)



XX [YY] = AM [PM]

Intersection of Avenue P and East 19th Street
(10/30/08)

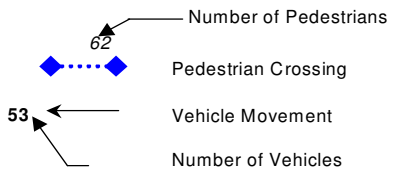
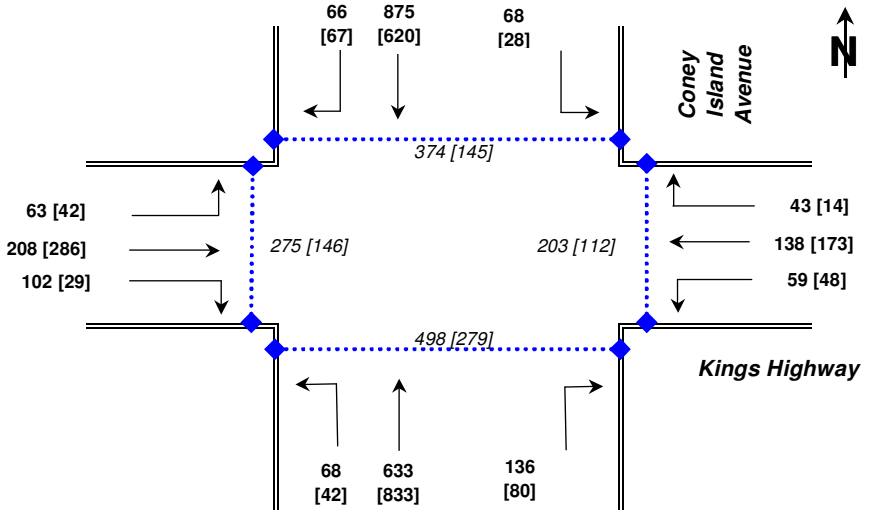


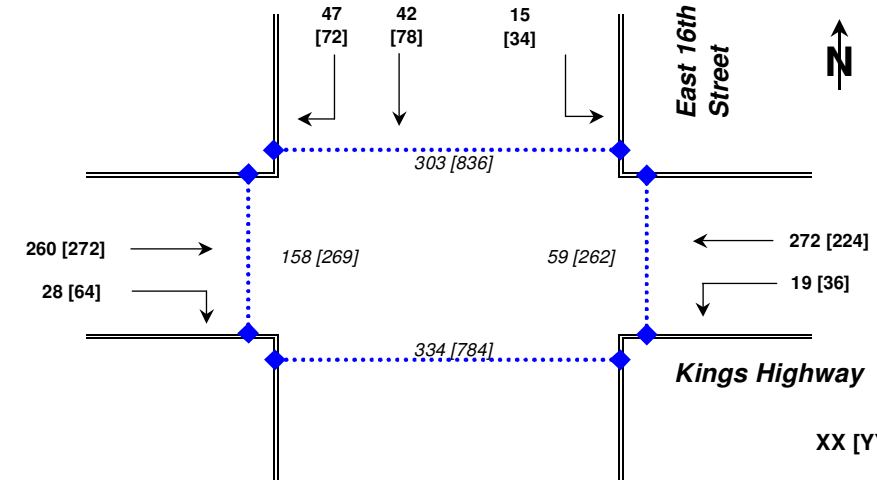
EXHIBIT D
MIDWOOD, BROOKLYN
TRAFFIC COUNTS

APPENDIX C – TRAFFIC COUNT (CONT.)

One Hour Traffic Count Volumes



Intersection of Kings Highway and Coney Island Avenue (10/23/08)



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Intersection of Kings Hwy and East 16th Street
10/22/2008

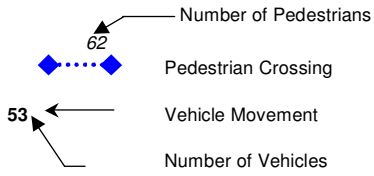
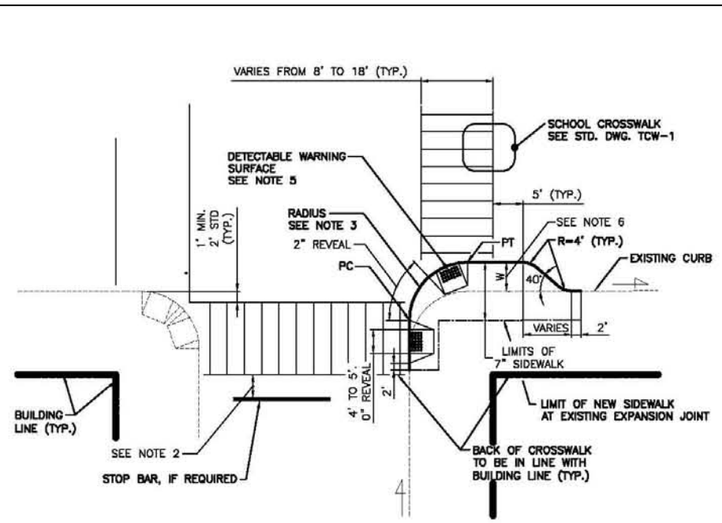


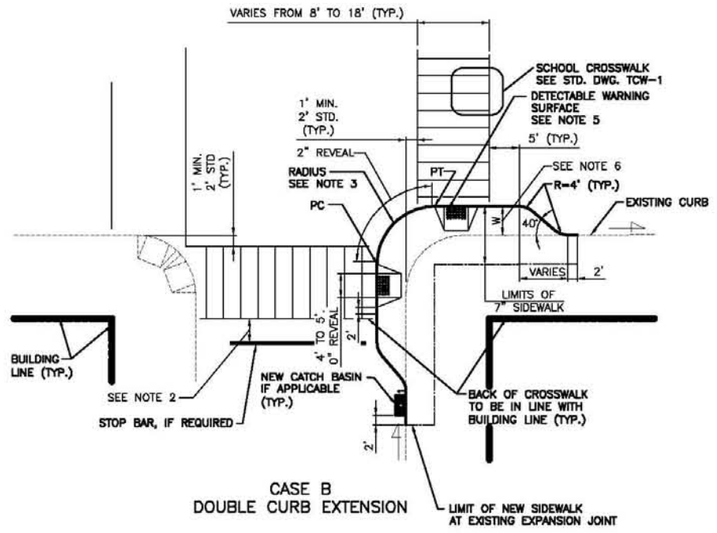
EXHIBIT D
MIDWOOD, BROOKLYN
TRAFFIC COUNTS

APPENDIX D:
CONSTRUCTION DETAILS

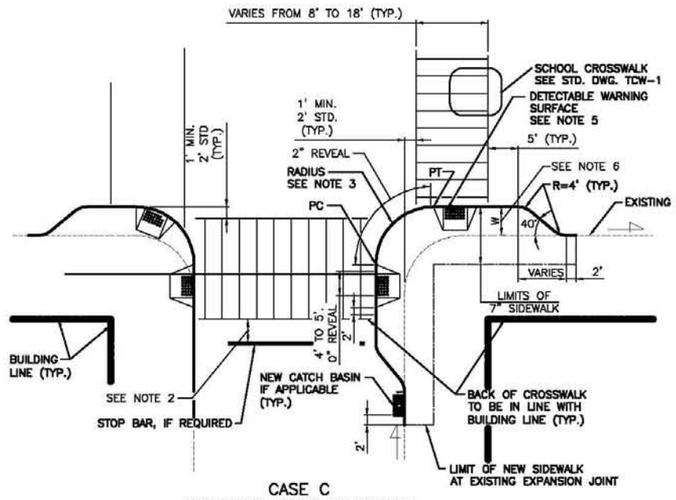
APPENDIX D – CONSTRUCTION DETAIL – CURB EXTENSIONS



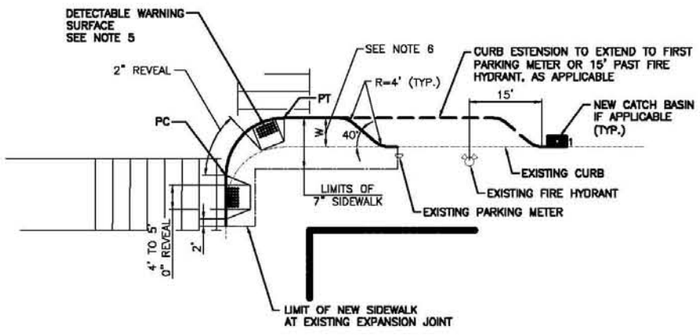
CASE A
SINGLE CURB EXTENSION



CASE B
DOUBLE CURB EXTENSION



CASE C
OPPOSING CURB EXTENSION



CASE D
CURB EXTENSION AT HYDRANT
OR PARKING METER.

LOCATION	CASE	LENGTH
NORTHWEST CORNER OF AVENUE P & EAST 9TH ST.	A	44.0'
NORTHWEST CORNER OF AVENUE P & CONEY ISLAND AVE.	B	75.0'
SOUTHEAST CORNER OF AVENUE P & CONEY ISLAND AVE.	B	79.0'
SOUTHWEST CORNER OF AVENUE P & OCEAN AVENUE	A	47.0'
SOUTHEAST CORNER OF AVENUE P & OCEAN AVENUE	A	42.0'
NORTHEAST CORNER OF KINGS HIGHWAY & EAST 9TH ST.	A	41.0'

REVISIONS		
DATE	APPD	DESCRIPTION

NOTES:

1. ALL CROSSWALK LINES TO BE 12" WIDE THERMOPLASTIC PAVEMENT MARKINGS
2. STOP LINES SHALL BE 24" WIDE AND LOCATED AT EITHER:
   A. THE BUILDING LINE
   B. 4' FROM STANDARD CROSSWALK
   C. 10' FROM SCHOOL CROSSWALK
3. THE RADIUS, R OF THE CORNER QUADRANT SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS OF H-1101 FOR SIDEWALK PEDESTRIAN RAMPS AND THE FOLLOWING GUIDELINES SHALL BE APPLIES IN DETERMING THE RADIUS, R OF THE CORNER QUADRANT:

   R=12' INTERIOR > 90
   R=13' INTERIOR BET. 83 AND 93
   R=14' INTERIOR BET. 77 AND 90
   R=15' INTERIOR BET. 72 AND 81
4. CURB EXTENSIONS SHALL BE CONSTRUCTED OF STEEL FACED CONCRETE CURB, 18 MINIMUM DEPTH. REFER TO H1010 R79 (LATEST REVISION) FOR STEEL FACED CURB – TYPE D.
5. REFER TO H1011 (LATEST REVISION) FOR DETECTABLE WARNING SURFACE
6. REFER TO H1011 (LATEST REVISION) FOR ADDITIONAL NOTES AND REQUIREMENTS FOR THE PEDESTRIAN RAMPS CORNER QUADRANT AREA OF THE SIDEWALK.
7. THE WIDTH, W FO THE NECKDOWN IS EQUAL TO WIDTH OF THE PARKING LANE MINUS TWO (2) FEET. SEE TABLE BELOW.

WIDTH OF PARKING LANE (FT)	WIDTH OF NECKDOWN, W (FT)
7	5
8	6

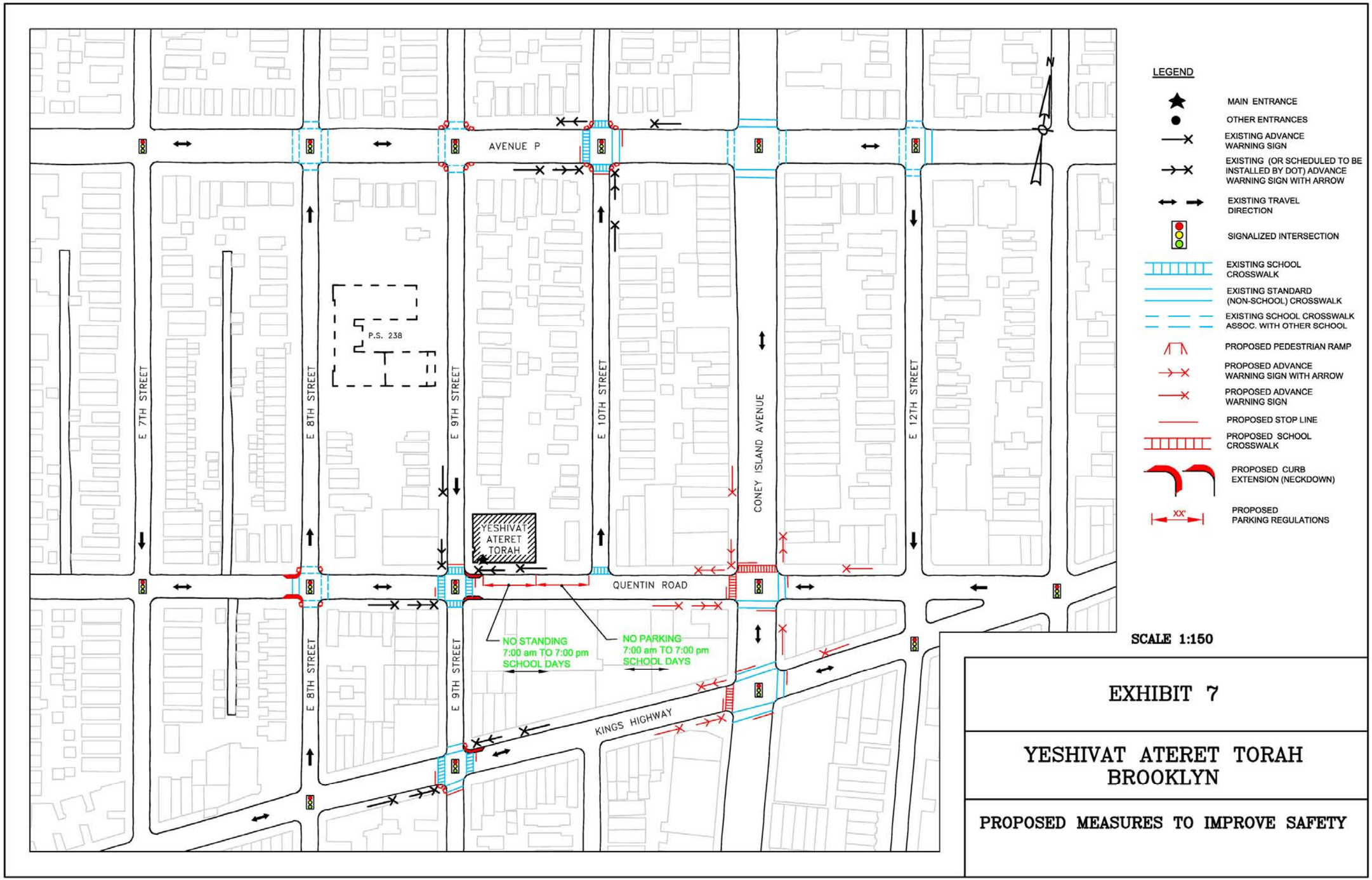
8. INSTALLATION OF A NECKDOWN MUST ALLOW FOR THE TURNING MOVEMENT OF A THIRTY FOOT SIGNLE UNIT TRUCK (SU-30). ON DESIGNATED TRUCK ROUTES OR REGULARLY SCHEDULE BUS ROUTES THAT REQUIRE TURNING, THE APPROPIATE DESIGN VEHICLE SHALL BE USED.
9. A FIRE TRUCK TURNING ZONE WITH A FIFTY FOOT OUTSIDE RADIUS SHALL BE MAINTAINED CLAER OF PHYSICAL OBSTRUCTIONS (SIGNS, PLANTERS, NON-FLEXIBLE BOLLARDS, TRESS, ETC.
10. A 22-FOOT MINIMUM ROADWAY WIDTH (FROM CURB TO CURB OR PARKED VEHICLE) MUST BE MAINTAINED AT A FIRE HYDRANT, SO THAT A FIRE TRUCK MAY PASS ANOTHER PARKED AT THE HYDRANT.
11. FIRE HYDRANTS AND PARKING METERS SHALL BE MOVED ONTO THE NECKDOWN. PLACEMENT SHALL BE IN ACCORDANCE WITH APPROPIATE NYCDOT AND NYCDEP DESIGN STANDARDS.

CITY OF NEW YORK — DEPARTMENT OF TRANSPORTATION
BUREAU OF TRAFFIC OPERATIONS
28-11 Queens Plaza North — L.I.C., N.Y. 11101

CURB EXTENSIONS AND PAVEMENT MARKING CONFIGURATIONS

APPROVED
BY _____
Drawn by J.M.
Checked by N.A.
Borough N/A
Scale AS NOTED
Date 11/30/2007
DRAWING NO. XXX-X

APPENDIX E:
SCHOOL SAFETY EXHIBIT


AVENUE P
E 7TH STREET
E 8TH STREET
E 9TH STREET
E 10TH STREET
CONEY ISLAND AVENUE
E 12TH STREET
P.S. 238
YESHIVAT ATERET TORAH
QUENTIN ROAD
KINGS HIGHWAY
NO STANDING 7:00 am TO 7:00 pm SCHOOL DAYS
NO PARKING 7:00 am TO 7:00 pm SCHOOL DAYS
N
LEGEND
MAIN ENTRANCE
OTHER ENTRANCES
EXISTING ADVANCE WARNING SIGN
EXISTING (OR SCHEDULED TO BE INSTALLED BY DOT) ADVANCE WARNING SIGN WITH ARROW
EXISTING TRAVEL DIRECTION
SIGNALIZED INTERSECTION
EXISTING SCHOOL CROSSWALK
EXISTING STANDARD (NON-SCHOOL) CROSSWALK
EXISTING SCHOOL CROSSWALK ASSOC. WITH OTHER SCHOOL
PROPOSED PEDESTRIAN RAMP
PROPOSED ADVANCE WARNING SIGN WITH ARROW
PROPOSED ADVANCE WARNING SIGN
PROPOSED STOP LINE
PROPOSED SCHOOL CROSSWALK
PROPOSED CURB EXTENSION (NECKDOWN)
XX'
PROPOSED PARKING REGULATIONS
SCALE 1:150
EXHIBIT 7
YESHIVAT ATERET TORAH
BROOKLYN
PROPOSED MEASURES TO IMPROVE SAFETY