Staten Island

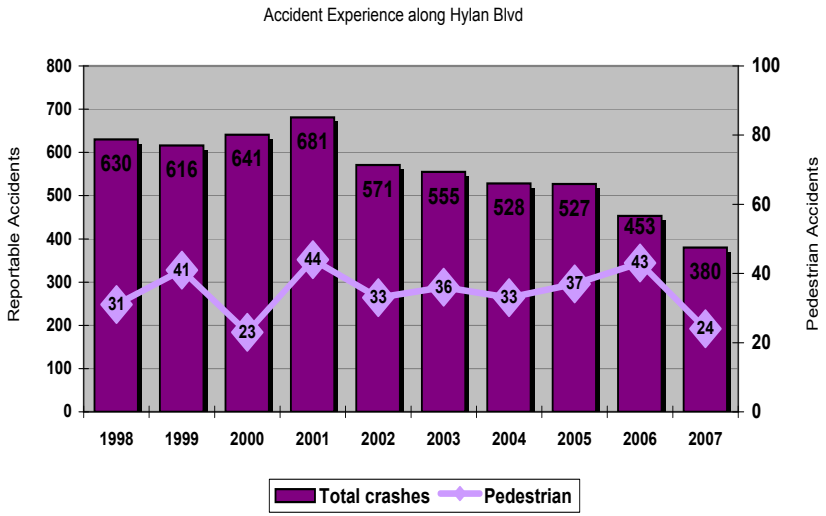
Hylan Boulevard

Description

Hylan Boulevard, Staten Island's longest commercial roadway, serves as one of borough's primary roadways. This 14-mile long corridor connects the island along the eastern shore, linking Rosebank and Tottenville. Throughout the corridor, there are many residential communities and active commercial districts that attract numerous vehicular trips. In addition, Hylan Boulevard serves as a principal commuter route to and from the Verrazano-Narrows Bridge and serves as an alternate route to the Outerbridge Crossing.

Due to the nature and function of this corridor, Hylan Boulevard is frequently congested on both weekdays and weekends, especially during peak travel hours. As such it has been a primary focus for both residents and public agencies. In 2000, a task force was created (comprised of members of DOT and NYPD) to formulate solutions to safety and operational problems along Hylan Boulevard. This task force built upon past accomplishments and programs that were implemented in 1999.

Safety is a primary concern along the entire length of Hylan Boulevard. Vehicular crashes generally increased from 1998 to 2001, but have since decreased every year. In 2007, there was a total of 380 crashes, the lowest recorded, representing a 40% decline since 1998.



Implemented Improvements

Improvements made to Hylan Boulevard include the installation of left-turn bays and an innovative two-way left turn lane.

Left turn bays were installed at the following intersections on Hylan Boulevard in summer 1999:

- Adams Avenue
- Arden Avenue
- Bedford Avenue
- Jefferson Avenue
- Liberty Avenue
- Page Avenue
- Seaview Avenue
- Stobe Avenue

The first two-way left turn lane in the City was installed along a 600–foot stretch of Hylan Boulevard between Lincoln and Midland Avenues in July 1999. The two-way left turn lane is located in the center of the boulevard; vehicles are permitted to make a left turn from this lane from either direction of travel on Hylan Boulevard. It provides for safe access to the many commercial establishments located in the area.

Large street name signs were first installed at seven major intersections along Hylan Boulevard in May 2000. The signs are supported from mast arms extending over the roadway. At the same time, 12 large street name signs were installed in advance of six major signalized intersections

between Steuben and Ebbitts Streets. These improvements primarily assist motorists with vision limitations and visitors unfamiliar with the area in identifying cross streets. In the spring of 2003, seven additional intersections received the oversized street name signs. These signs were installed at:

- Chesterton Avenue
- Buffalo Street
- Justin Avenue
- Bay Terrace
- Keegans Lane
- Cleveland Avenue
- Armstrong Avenue

More recently, additional oversized street name signs were installed at additional intersections along this corridor as part of the Oversized Street Name Sign program. As of February 2007, there are 296 such signs posted along Hylan Boulevard.

“Emergency Exit” and “Keep Driveway Clear” signs and “Keep Clear” pavement markings were installed on Hylan Boulevard at the 122nd precinct near Bryant Avenue in May 2000.

In May 2000, on a trial basis, signal timing at the intersection of Hylan Boulevard at New Dorp Lane was modified so that each direction of New Dorp Lane moved on separate signal phases. The trial program was discontinued and the traffic signal pattern reverted to the prior “normal sequence” pattern in conjunction with implementation of the following improvements:

- The left turn bay on Hylan Boulevard was extended by 100 feet in the westbound direction to accommodate five additional vehicles or 200 vehicles per hour.

- The raised center median (approximately 290 feet) from New Dorp Lane to Jacques Street was removed and replaced with a center divider comprised of flexible bollards.
- The roadway was resurfaced between New Dorp Lane and Jacques Street.
- Rush-hour parking restrictions were implemented between Guyon Avenue and Steuben Street.
- Five bus stops were relocated from near side to far side locations to improve traffic flow. In addition, three bus stops were lengthened to provide more space for buses to unload passengers and prevent spillback into the intersection.
- In coordination with NYC Transit, ensured that buses pull to the curb to pick up and discharge passengers.
- In coordination with the Police Department, increased enforcement of parking regulations along Hylan Boulevard (especially deliveries and bus stop violations during the AM and PM peak periods).
- In coordination with the Department of Sanitation and private sanitation companies, ensured that no pickups occur during the AM and PM peak periods.

These improvements resulted in PM peak travel time savings of approximately six minutes on southbound Hylan Boulevard between Jefferson Avenue and Beach Avenue. This represents a 57% reduction in travel time from 10.5 minutes to 4.5 minutes.

- All crosswalks on Hylan Boulevard were refurbished in April 2002.

Since May 2000, new traffic signals have been installed on Hylan Boulevard at the following locations:

- Hylan Boulevard and Arbutus Avenue (June 2000)
- Hylan Boulevard and Sharrotts Avenue (September 2000)
- Hylan Boulevard and Sprague Avenue (April 2001)
- Hylan Boulevard and Holdridge Street (March 2002)
- Hylan Boulevard and Holton Avenue (March 2003)
- Hylan Boulevard and Benton Avenue (May 2004)
- Hylan Boulevard and Bayview Avenue (April 2004)
- Hylan Boulevard and Cunningham Road (September 2005)

At the intersection of Hylan Boulevard and Old Town Road/Quintard Street, the Department implemented a safety project that included exclusive left turn signals for the Old Town Road and Quintard Street approaches, lane usage markings and signage, guard rails to separate a parking lot from the road bed of Quintard Street and a sidewalk cut back to facilitate turning movements. All work was completed in December 2004.

Hylan Boulevard
Left Turn Improvements

Example of intersection on Hylan Boulevard where no turning lane exists in either direction.

In May 2005, NYCDOT, in consultation with the NYPD and the Staten Island Borough President, initiated a consultant study to determine the feasibility of prohibiting left turns from Hylan Boulevard at intersections along the 6.2 mile segment between Steuben Street and Richmond Avenue.

This initiative was being pursued to improve the traffic flow along Hylan Boulevard, as well as improve the safety and operation of vehicles along the corridor. The corridor is constrained by its current alignment and the lack of dedicated turning bays at many locations. Accordingly, vehicles making left turns from Hylan Boulevard can have a detrimental effect on the through movement of vehicles travling along Hylan Boulevard.

In total, 110 intersections were reviewed, of which 27 intersections currently have left turn lanes and/or signals.

As part of the Staten Island Task Force study, consideration was given to prohibiting left turns at intersections where separate left turn lanes did not exist in both the eastbound and westbound directions for the AM and PM weekday peak periods, as well as for all time periods. In addition to recommended prohibitions, the study included a needs analysis for new directional signage as alternatives to left turns at prohibited intersections. The initial study results indicated that there were 50 intersections that prohibit left turns, leaving 33 intersections for consideration of left turn movements.

Treatments at these locations included the prohibition of left turns and the detour of traffic off of Hylan Boulevard, the installation of new signals, and the construction of new turning lanes at additional locations. Traffic often builds up on Hylan Boulevard due to cars queuing behind a vehicle attempting to make a left turn. By prohibiting left turns where space does not permit this movement and constructing turning bays at other intersections it is expected that traffic volumes and crashes will decrease on Hylan Boulevard.

The study was completed in July 2006. Upon completion of the report, NYCDOT reviewed the consultant findings and examined the feasibility of these recommendations and established an implementation schedule for these restrictions. DOT prohibited left turns at 24 intersections and constructed new left turn bays to facilitate left turn movements at an additional 10 intersections. Collectively, these improvements should have a substantial effect on improving congestion on one of Staten Island's most critical and heavily traveled corridors.

As of January 6, 2007, all signals, signs and markings were completed. Preliminary figures show that crashes are down, speeds are up, and the traffic flow is far better than before.

Improvements Implemented as of April 2007

New Left Turn Bays at Hylan Boulevard and:

- Dongan Hills Avenue — new W/B left
- Cleveland Avenue — new E/B & W/B left

Median Closures at Hylan Boulevard and:

- Bath Avenue
- Cooper Avenue
- Peter Avenue
- Seacrest Avenue
- Thornycroft Avenue
- Pacific Street
- Groton Street
- Hopkins Avenue
- Ainsworth Avenue
- Heinz Avenue
- Glover Street
- turning bay between Ainsworth Avenue & Redgrave Avenue

Left Turn Prohibitions at Hylan Boulevard and:

- Kensington Street — W/B left
- Parkinson Avenue — W/B & E/B left
- Reid Avenue — E/B left
- Benton Street — E/B & W/B left
- Raritan Avenue — E/B & W/B left
- Delaware Avenue — W/B left
- Alter Avenue — E/B & W/B left
- Garretson Avenue — W/B left
- Bryant Avenue — W/B left

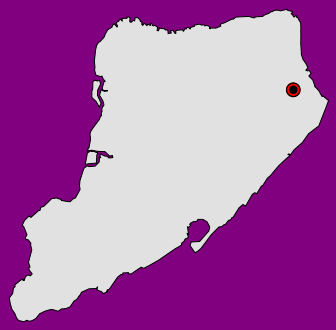
- Otis Avenue W/B left
- Locust Avenue E/B & W/B left (Except W/B trucks)
- Justin Avenue E/B & W/B left
- Hillside Terrace E/B & W/B left
- Wiman Avenue E/B & W/B left
- Naughton Avenue E/B & W/B left
- Hull Avenue E/B & W/B left
- Hamden Avenue E/B & W/B left
- Stobe Avenue E/B left
- Liberty Avenue W/B left
- Adams Avenue E/B left
- Bedford Avenue E/B left

Left Turn Phase Added to Signal at Hylan Boulevard and:

- Clove Road/Norway Avenue new W/B left turn phase
- Reid Avenue new W/B left turn phase
- Burgher Avenue new W/B left turn phase
- Cromwell Avenue new W/B left turn phase
- Seaview Avenue new E/B left turn phase
- Richmond Avenue new E/B left turn phase
- Keegans Lane new E/B left turn phase
- Cleveland Avenue new E/B & W/B left turn phase
- Bay Terrace new E/B left turn phase
- Buel Avenue new E/B & W/B left turn phase
- Seaver Avenue new E/B & W/B left turn phase
- Jefferson Avenue new E/B & W/B left turn phase

New Traffic Signal at Hylan Boulevard and:

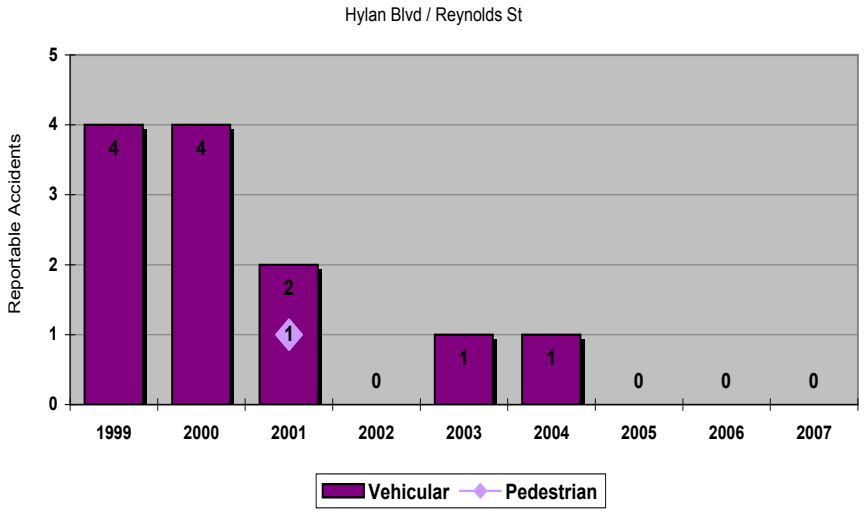
- Bryant Avenue
- Wiman Avenue



Hylan Boulevard and Reynolds Street

Description

Building upon DOT's efforts to improve safety along the entire length of Hylan Boulevard, the Department implemented a set of safety improvements at Hylan Boulevard in the vicinity of Reynolds Street. This section of Hylan Boulevard was very wide (70 feet) with two moving lanes in each direction and a high incidence of speeding. While not a high crash intersection, this location experienced a rising crash trend from 1999 through 2000. In 1999 there were four reportable crashes and four in 2000. There were no pedestrian crashes or fatalities during these two years. In 2001, there were three total crashes, of which one involved a pedestrian fatality. The Department implemented a series of traffic calming measures in December 2001. Since then, there have been no fatalities at this intersection. **There were no reportable crashes at this intersection in 2002 and 2005 through 2007 and only one crash in both 2003 and 2004.** The improvements implemented at this intersection have made this location increasingly safer.



Improvements Implemented in December 2001

In an effort to improve pedestrian safety and crossing time on Hylan Boulevard in the vicinity of Reynolds Street, the Department implemented a traffic calming measure to narrow the roadway to one moving lane in each direction between Tompkins Avenue and Colton Street. Roadway markings were installed to narrow the roadway and a raised center median was installed at the Hylan Boulevard/Reynolds Avenue intersection to supplement the painted median. At Tompkins Avenue, the Department installed new signs to help direct motorists through the intersection. Additionally, the crosswalk at the Hylan Boulevard/Reynolds Avenue intersection was relocated from the west to the east leg. All work was completed in December 2001.

Roadway markings and raised intersection at Hylan Boulevard and Reynolds Street

This improvement also resulted in decreased speeds on Hylan Boulevard, particularly in the westbound direction. There was a greater impact on eastbound speeds. Average speeds decreased by 8.6% eastbound (to 33.1 mph from 36.2 mph) and 3.6% westbound (to 35.3 mph from 36.6 mph). Eighty-fifth percentile speeds decreased 14% eastbound (to 37.0 mph from 43.0 mph) and 4.3% westbound (to 40.2 mph from 42.0 mph). Although speeds have decreased, they remain relatively high and the local precinct has been asked to increase enforcement on this section of Hylan Boulevard.

Father Capodanno Boulevard

Description

Father Capodanno Boulevard is a 2.8-mile roadway that operates along the southeast shore of Staten Island. This roadway is used as an alternate to Hylan Boulevard as it provides a direct access to the Verrazano-Narrows Bridge. The roadway geometry consists of sharp curvature in the vicinity of Sand Lane, but is generally straight and level. Motorists tend to speed during off-peak hours when traffic volumes are light and there is considerable excess available capacity. Four fatalities occurred on this roadway between 1993 and 2000, however no fatalities have occurred since 2001.

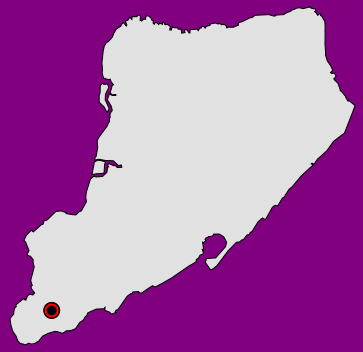
Improvements Implemented

- Trailer mounted speed boards were placed (facing both directions) approximately 1000 feet south of Slater Boulevard in January 2000. The unit facing northbound traffic was vandalized and removed in June 2000.
- A new signal was installed at the intersection of Father Capodanno Boulevard/Slater Boulevard in June 2000.
- Installed traffic signal poles with oversized 40 foot mast arms on each approach at the intersection of Father Capodanno Boulevard and Seaview Avenue. These improvements

New traffic signal pole with oversized mast arm at Father Capodanno Boulevard and Seaview Ave. In addition, an illuminated street name sign is affixed to the mast arm

Future Improvements

In order to maintain capacity during commuter rush hours and control speeding during off-peak hours when there is excess capacity, we are working with our Consultant using the Engineering Service Agreement to implement lane control systems on Father Capodanno Boulevard (2.6 miles) from Greely Avenue to Lily Pond Avenue. It has been found that there is excess capacity at various times of the day resulting in violations of the speed limit. The lane control signal system will restrict the use of select lanes (in both directions) at various times of the day as designated by NYCDOT. By the end of the year, the Consultant will develop preliminary design concepts for the Boulevard, various options will be investigated and recommendations will be made.



Page Avenue and P.S. 6

Description

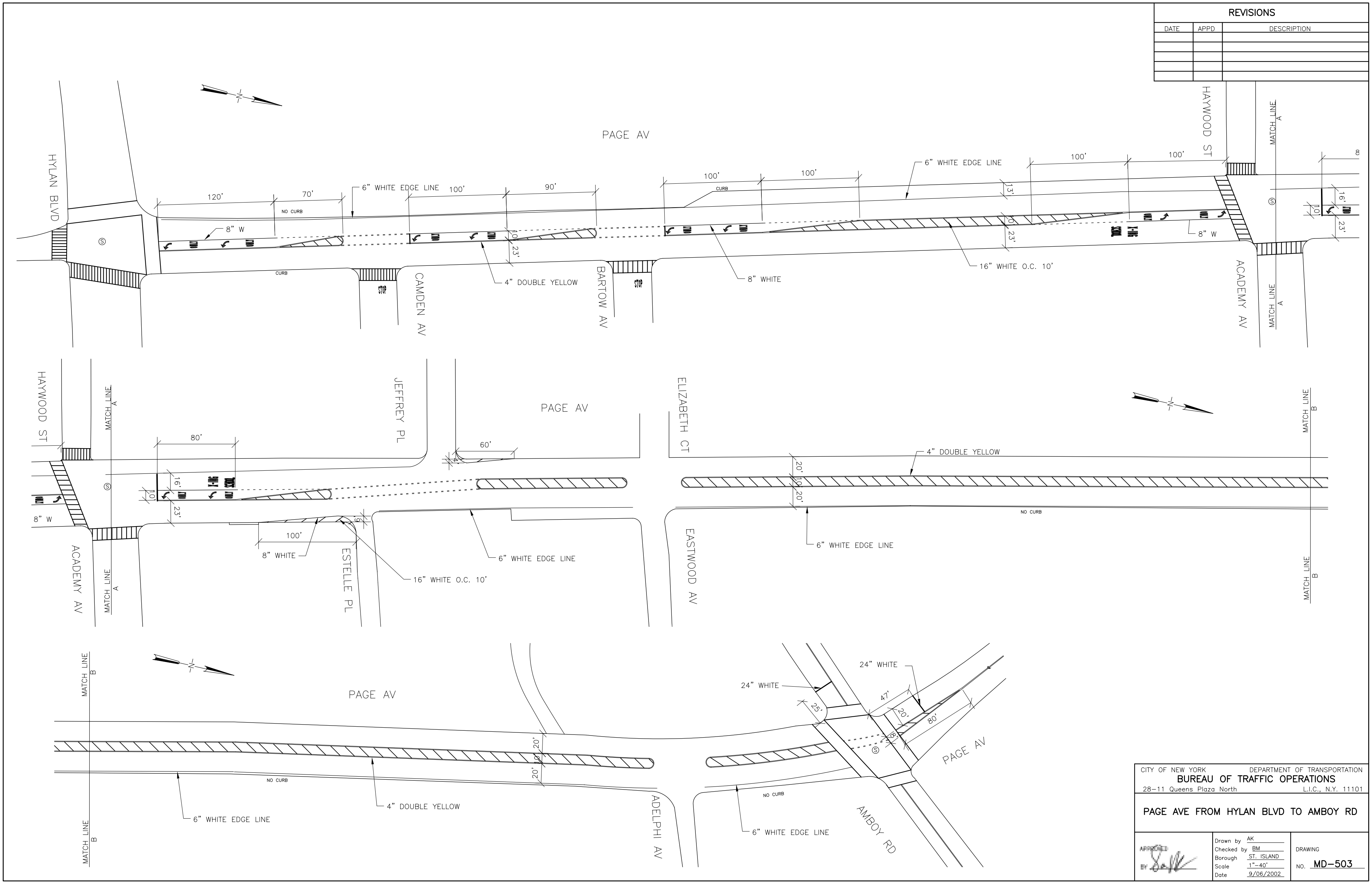
PS 6, which is located on Page Avenue between Hylan Boulevard and Amboy Road, had many safety concerns, particularly during arrival and dismissal times. Among those problems were the absence of sidewalks along Page Avenue, the absence of traffic controls at the Page Avenue/Academy Place intersection, and motorists' failure to obey parking/traffic regulations, particularly speeding, illegal U-turns, and double parking. Radar speed surveys conducted along Page Avenue showed that the 85th percentile speeds were 48 mph northbound and 47 mph southbound. Based upon these concerns, the Department took a proactive approach at this location.

Implemented Improvements

- Phase I of the sidewalk and curb installation for a distance of 400 feet on the west side of Page Avenue (opposite the school) was completed in the fall of 2000. Phase II, which included 200 feet on the east side of Page Avenue between Hylan Boulevard and Bartow Avenue and 100 feet along the bus stop on the north side of Hylan Boulevard at Page Avenue, was completed concurrently. As a result of the completion of Phases I and II, a continuous safe walkway for students now exists from the bus stop on Hylan Boulevard to PS 6.
- Pedestrian signals were installed at the Page Avenue/Amboy Road intersection in February 2001.
- Installed No U-Turn signs at the Academy Avenue/Page Avenue intersection in March 2001.

- Missing speed limit signs were replaced in the area in June 2001.
- A traffic signal was installed at the Page Avenue/Academy Avenue intersection in September 2001.
- New pedestrian and school crosswalks and school crossing markings word messages were installed on Page Avenue from Hylan Boulevard to Amboy Road. All work was completed in April 2002.
- School crossing signs (yellow-green fluorescent) and advance warning signs were installed at the Page Avenue/Bartow Street intersection in December 2000, at the Academy Avenue/Page Avenue intersection in October 2001, and at the Camden Avenue/Page Avenue and Hylan Boulevard/Page Avenue intersections in early August 2002.
- A painted median was installed to narrow the roadway on Page Avenue between Hylan Boulevard and Amboy Road in September 2002.
- Phase III, which includes installation of 2,000 feet of sidewalks and curbs on the west side of Page Avenue (between Academy Place and Amboy Road) was completed in early August 2002. Completion of Phase III provided a continuous walkway from Hylan Boulevard to Amboy Road.
- At the intersection of Page Avenue and Academy Avenue, the cycle length was increased from 60 to 90 seconds to allow an additional nine seconds (from 27 to 36 seconds) to cross Page Avenue. (May 2004)

The improvements are illustrated on the following page.

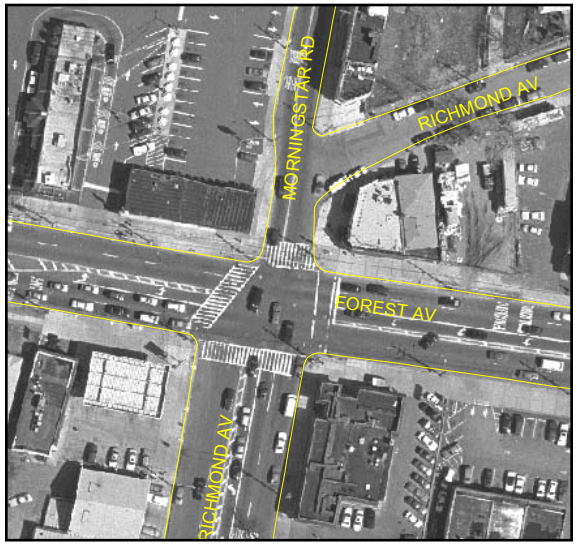

REVISIONS
DATE
APPD
DESCRIPTION
PAGE AV
HYLAN BLVD
CAMDEN AV
BARTOW AV
HAYWOOD ST
ACADEMY AV
MATCH LINE A
6" WHITE EDGE LINE
4" DOUBLE YELLOW
8" WHITE
16" WHITE O.C. 10'
8" W
NO CURB
CURB
STOP
JEFFREY PL
ELIZABETH CT
ESTELLE PL
EASTWOOD AV
MATCH LINE B
ADELPHI AV
AMBOY RD
24" WHITE
CITY OF NEW YORK
DEPARTMENT OF TRANSPORTATION
BUREAU OF TRAFFIC OPERATIONS
28-11 Queens Plaza North
L.I.C., N.Y. 11101
PAGE AVE FROM HYLAN BLVD TO AMBOY RD
Drawn by AK
Checked by BM
Borough ST. ISLAND
Scale 1"-40'
Date 9/06/2002
DRAWING NO. MD-503

Borough Wide Daylighting Initiative

Description

The process of “Daylighting” an intersection has both safety and operational benefits. “Daylighting” refers to the process of installing restrictive parking regulations at intersections to improve visibility and safety for motorists. These parking restrictions are designed to help motorists gain an unobstructed view of traffic approaching the intersection, as well as additional travel lanes or turning pockets at intersections. In the past, the Department of Transportation has worked closely with the Staten Island Borough Presidents and the local police precincts to identify intersections that would benefit from daylighting to enhance safety in the borough. As part of the Staten Island Task Force initiative, the Department of Transportation has recommitted itself to identifying additional locations throughout the borough which would benefit from these treatments. This commitment includes the identification of twelve intersections a month to implement this treatment. The cost of implementing these treatments is minimal compared to the safety benefits - daylighting requires only the posting of parking regulations to restrict parking outright along the approaching curb. During 2006, the Department met its goals of implementing these treatments at 12 locations per month. As of April 1, 2007 this treatment had been installed at 128 locations. **Working with the Staten Island Borough President and the local police precincts, the Department has since continued to identify and implement this treatment at intersections that would benefit from daylighting to enhance safety in the borough. This is an ongoing project.**

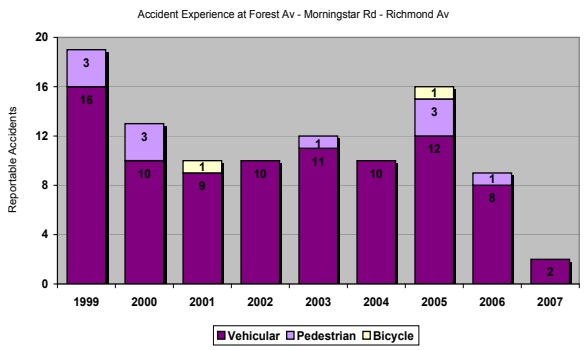
Forest Avenue, Morningstar Road, and Richmond Avenue



Original configuration of intersection

Description

Richmond Avenue and Forest Avenue function as major arterials through Staten Island. Forest Avenue which runs east-west across the island, intersects Richmond Avenue and Morningstar Road. South of the intersection, Richmond Avenue is a wide two-way roadway. North of the intersection, Morningstar Road functions as a connector between Forest Avenue and the continuation of a narrower Richmond Avenue, In addition, the Morningstar Road approach to Forest Avenue is offset with Richmond Avenue and is much narrower. Overall, this intersection is the focus of high vehicular activity, as the surrounding land use is predominately commercial. A significant generator of this traffic is along the northwest corner of Forest Avenue and Morningstar Road. These conditions created numerous vehicular conflicts and illegal maneuvers by motorists.

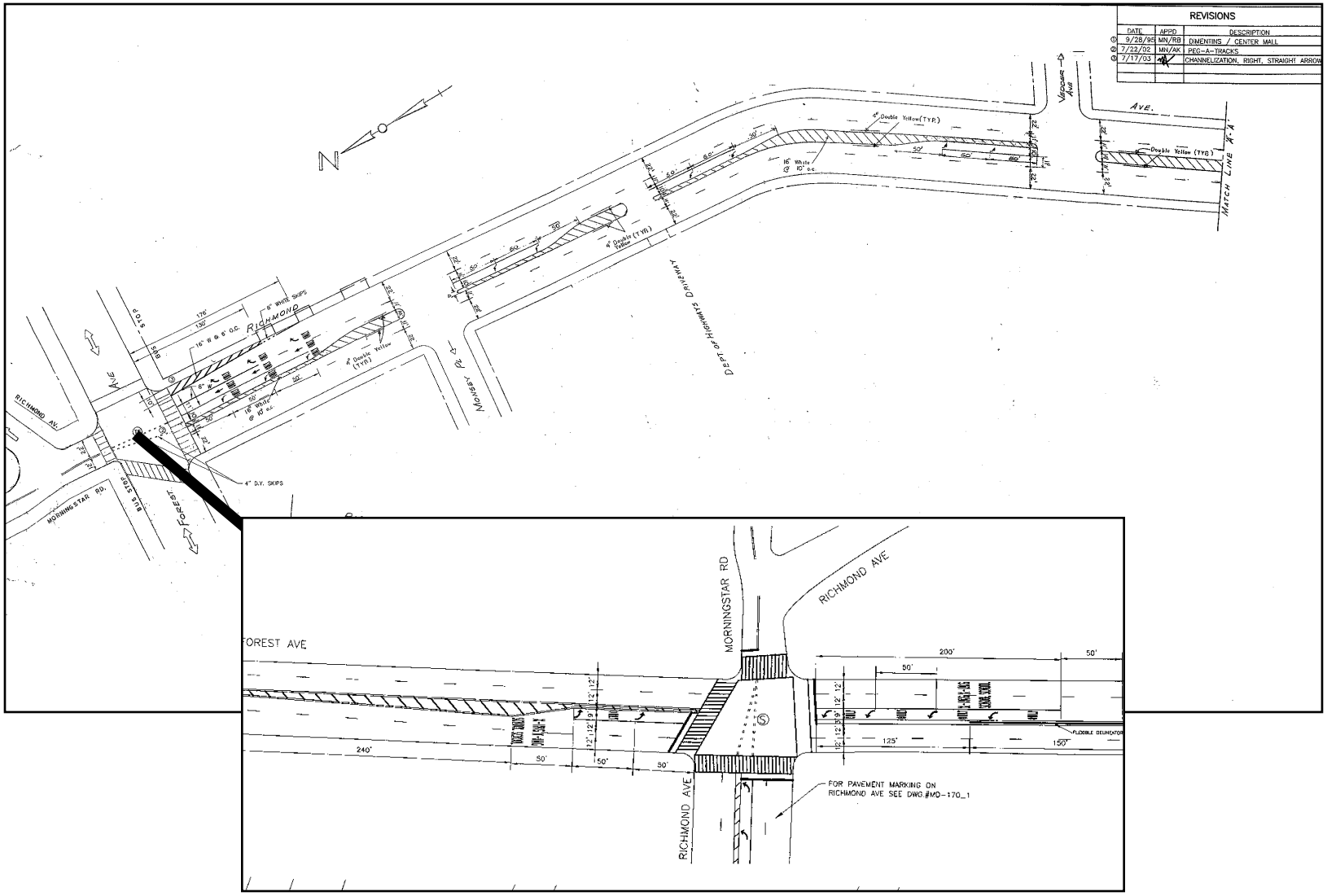


Based upon an increasing number of crashes and concerns about the illegal movements of vehicles at this intersection, the Department took a proactive approach to address these concerns. The crash history at this location indicates a 31.6% decrease in reportable crashes between 1999 and 2000. Vehicular crashes dropped 37.5% to 10 from 16, but pedestrian crashes remained constant at three. Between 2001 and 2004, reportable crashes fluctuated between 10 and 12, with only one pedestrian and one bicyclist crash during this time. However, in 2005 reportable crashes spiked to 16, including three pedestrian and one bicyclist. **By 2007, vehicular crashes were down to two and did not include any pedestrian or cyclist crashes.**

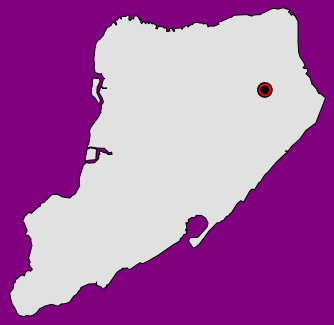
Implemented Improvements

- Flexible bollards were installed along the centerline of Forest Avenue in September 2002 to prevent vehicles from illegally crossing the painted center median while entering or exiting the ShopRite Plaza parking lot.
- Installed peg-a-tracs in September 2002 to identify the transition from the wider Richmond Avenue to the narrower Morningstar Road.
- Additional lane assignment markings and signage was installed on Forest Avenue, Morningstar Road and Richmond Avenue in August 2003.

The improvements are shown on the following page.



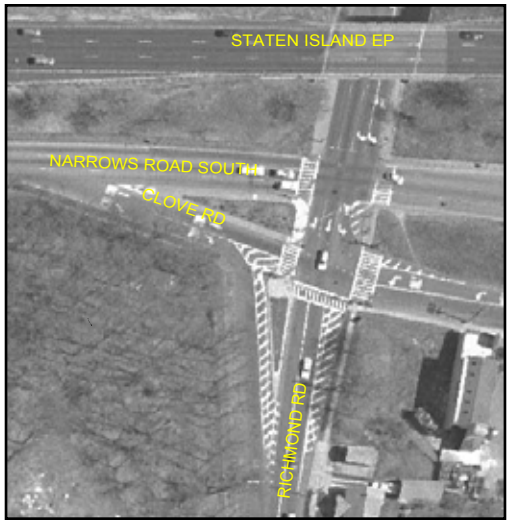
Details of markings and flexible bollards installed in 2002 and 2003



Narrows Road South and Richmond Road

Description

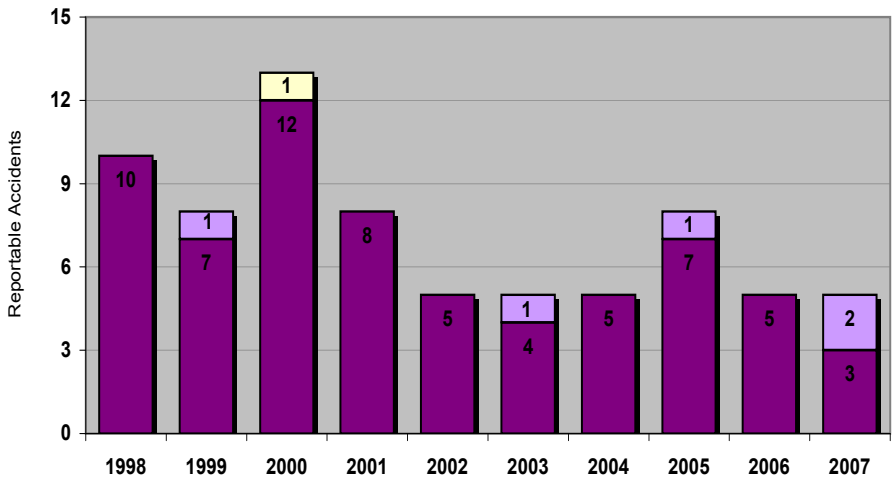
At this location, Narrows Road South functions as the eastbound service road for the Staten Island Expressway. Prior to the Richmond Road intersection, Narrows Road South forks providing access to both Clove Road as well as southbound Richmond Road. On the southern approach along Richmond Road, vehicles traveling southbound have the option to turn onto Narrows Road South or proceed a short distance further to turn onto Clove Road. In addition, Clove Road is two-way east of Richmond Avenue. Overall, the roadway configuration, geometries and lane assignments led to confusion for motorists regarding lane assignments on all three roadways intersecting at this location.



Aerial view of intersection

The crash experience at this intersection varied between 1998 and 2001. In 1998, there were a total of 10 reportable crashes. In November 1999, the Department installed advanced lane assignment signs and although crashes increased to 13 in 2000, crashes declined significantly by 39% to eight in 2001. Crashes continued to decline and remained at five from 2002 to 2004, with a slight increase to eight in 2005, including one pedestrian crash. **In 2006 and 2007, total crashes remained as low as five.**

Accident Experience at Narrows Rd South and Richmond Rd

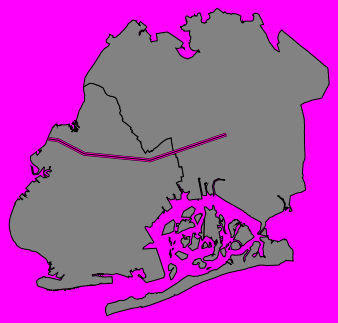


Implemented Improvements

- Additional directional/lane assignment signs were installed prior to the intersection to guide motorists in the appropriate direction in November 1999.
- Additional lane assignment signs were installed on the overpass at Richmond Road and Narrows Road North in November 2002.

Brooklyn/Queens

Atlantic Avenue in Queens at Rockaway Boulevard



Atlantic Avenue Safety Improvements

(Brooklyn and Queens)

Description

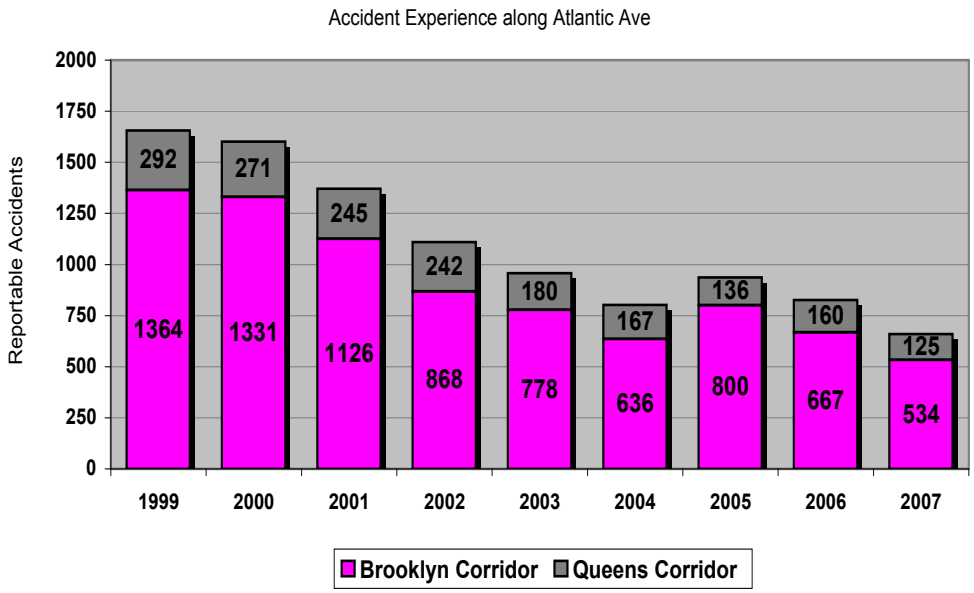
Atlantic Avenue is a primary local arterial roadway that connects the Brooklyn waterfront and the Brooklyn-Queens Expressway on the west with Conduit Avenue and the Van Wyck Expressway in Queens to the east. Atlantic Avenue is one of the major truck routes in Brooklyn as it traverses the entire borough along an east-west direction.

For the most part, the Atlantic Avenue corridor ranges between four and six moving lanes with two parking lanes. Several portions of the roadway also have a raised center median separating the roadways. In Brooklyn, land use along the Atlantic Avenue corridor is heavy with a bustling mix of residential and commercial land uses. In areas with a heavy concentration of land uses, such as the area in the vicinity of the Atlantic Avenue Long Island Rail Road Station (LIRR), there is a high convergence of pedestrians and vehicles. These contribute to high pedestrian volumes at several intersections and conflicts between motorists and pedestrians. These same conflicts are also apparent at locations where schools, high-density residential developments and commercial land uses are prevalent.

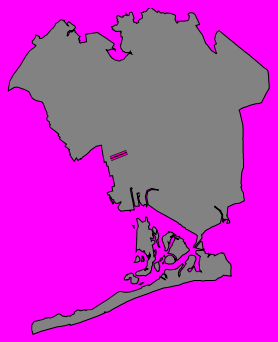
In Queens, adjacent land uses are primarily lower density residential developments with some industrial and commercial development along the corridor. There are also several public facilities such as schools and religious institutions along Atlantic Avenue, especially between Woodhaven and Rockaway Boulevards.

Traffic volumes in both Queens and Brooklyn are high, with both a high volume of passenger vehicles and trucks as Atlantic Avenue is a major truck route for Brooklyn. There are also several bus lines which travel along this corridor.

Another factor which contributes to safety concerns is the elevated train structure carrying the LIRR. This elevated train structure created unusual roadway geometries due to its placement over the entire roadway. Along this segment of the Atlantic Avenue corridor, vehicles are required to access a dedicated turning lane located on the inside of the elevated columns, while the primary travel lanes are located on the outside of the elevated columns. Left turns are problematic due to the limited sight distances and conditions created by the elevated columns.



In terms of the overall crash experience along Atlantic Avenue, the entire corridor experienced 1,656 reportable crashes in 1999 before it began the steady downward trend that lasted until 2004. Crashes decreased 52%, to 803 from 1656, between 1999 and 2004. Although crashes along the Brooklyn corridor increased to 800 from 636 in 2005, they had declined to 534 by 2007, a 61% decline since 1999. The Queens corridor experienced a substantial decrease in crashes, dropping 57% to 125 in 2007 from 292 in 1999.



Atlantic Avenue
Woodhaven Boulevard to Rockaway Boulevard

Implemented Improvements - Queens

Beginning in the mid 1980's, the Department performed a considerable amount of work to enhance vehicular and pedestrian safety along the Atlantic Avenue Corridor in Queens. These improvements have achieved considerable success and the Department continues to study and implement additional improvements along the corridor.

In 1987, the Department, in response to elected officials and community concern, initiated a safety study on Atlantic Avenue in the vicinity of Woodhaven and Rockaway Boulevards. The crash history in Atlantic Avenue at the time was not unusual for the volume of traffic, except for a series of three fatal crashes in 1987 which resulted in five fatalities. These crashes were attributed to alcohol abuse, red light violations, and high rates of speed.

In this area, Atlantic Avenue consisted of eight lanes (six moving and two parking), and a ten-foot wide raised center median. The roadway measured 90 feet in width. Adjacent land use was primarily low-density residential, along with dispersed civic institutions such as schools and churches.

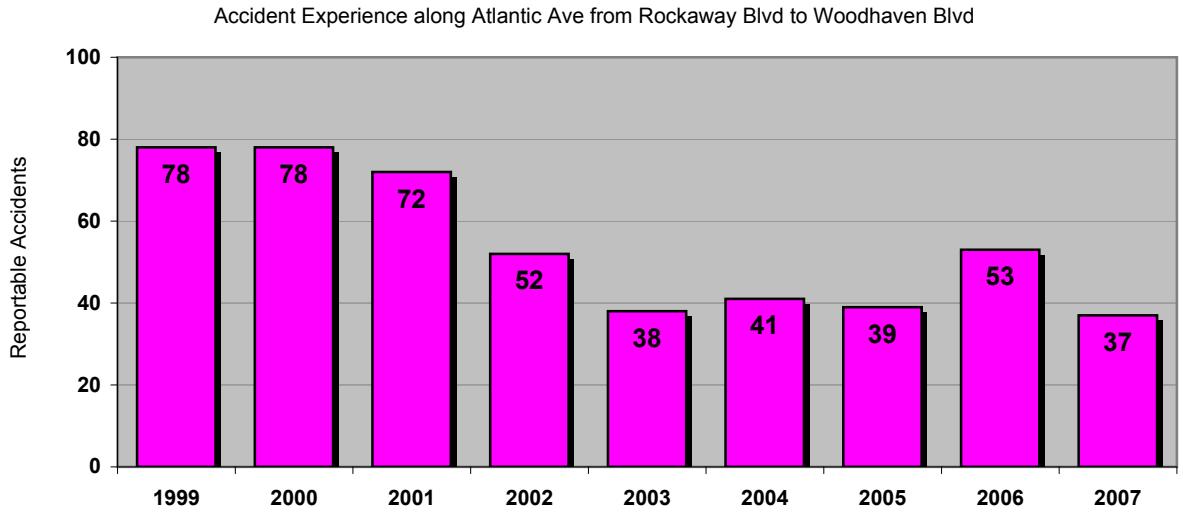
As part of its study, DOT and the NYPD initiated an aggressive safety campaign. Several immediate issues such as the installation of safety-related signs and increased summons activity took place. From October 1987 to March 1988, nearly 4000 summonses were issued (of which 500 were for red light violations), and 65 traffic signs were installed.

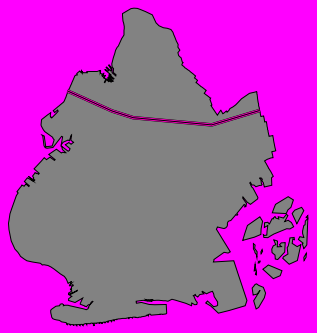
In addition, the department implemented a major capital improvement project to widen the center mall and provide for left turn bays. These improvements narrowed the roadway to two travel lanes and the turning bays reduced conflicts and rear-end crashes. The narrowed roadway also provided for reduced passing and weaving maneuvers. The medians also provide pedestrian refuge areas and reduced crossing distances for pedestrians.

These improvements led to a dramatic decrease in the number of crashes. In 1999, this corridor had 78 reportable crashes. **Crashes started a downward trend in 2001 and by 2007, crashes along this corridor had fallen to 37, a 53% decline since 1999.**

Additional improvements have included the upgrade of eight inch red signal lenses to twelve inch lenses for improved visibility at all problem locations.

In November 2003, a left turn signal was installed at Atlantic Avenue and Lefferts Boulevard.





Atlantic Avenue
Brooklyn Corridor

Implemented Improvements – Brooklyn

In Brooklyn, Atlantic Avenue serves as a vital primary east-west arterial, as it connects the Brooklyn waterfront with interior portions of the borough, as well as serving as a through truck route. As such, there are heavy vehicular and pedestrian volumes along most of the corridor.

Beginning in calendar year 2000, several improvements were implemented at the following intersections:

- Atlantic and Saratoga Avenues – A left turn phase for westbound Atlantic Avenue [March 2000]
- Atlantic and Troy Avenues – Exclusive left turn phase for eastbound Atlantic Avenue [March 2000]
- Atlantic Avenue and 96th Street (Queens) – A new traffic signal [September 2000]
- Atlantic Avenue and Clinton Street – A Leading Pedestrian Interval to cross Atlantic Avenue [November 2000]
- Atlantic and Vanderbilt Avenues – Left turn phases for both westbound Atlantic Avenue and northbound Vanderbilt Avenue [May 2002]
- Atlantic and Brooklyn Avenues – Exclusive left turn phase for westbound Atlantic Avenue [May 2002]
- Atlantic and Rockaway Avenues – A dual left turn phase for both directions of Atlantic Avenue [December 2002]

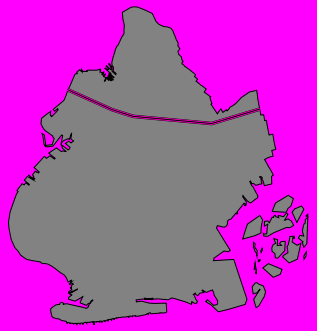
- Atlantic and Classon Avenues – A left turn phase for eastbound Atlantic Avenue [April 2002]
- Atlantic Avenue and Logan Street - A left turn phase for westbound Atlantic Avenue [April 2003]

The Department installed exclusive left turn signal phases at various locations where the eastbound and westbound roadways are separated by the elevated train structure. Vehicles making left turns are forced to do so from under the El structure with limited sight distances. The following locations were modified in August 2003 (except as noted) so that left turns are made only on an exclusive phase:

- Atlantic and New York Avenues [eastbound left turn phase]
- Atlantic and Schenectady Avenues [westbound left turn phase]
- Atlantic and Utica Avenues [dual left turn phase]
- Atlantic and Rochester Avenues [dual left turn phase]
- Atlantic and Buffalo Avenues [dual left turn phase]
- Atlantic and Kingston Avenues [eastbound left turn phase] (December 2003)
- Atlantic and Albany Avenues [westbound left turn phase] (December 2003)

Refurbished the crosswalks at the following intersections in June 2004:

- Logan Street
- Highland Place
- Essex Street
- Linwood Street
- Ashford Street
- Hendrix Street
- Van Siclen Avenue
- Miller Avenue
- Bradford Street
- Wyona Street
- Vermont Street
- New Jersey Avenue
- Pennsylvania Avenue



Atlantic Avenue
Safety Study

In September 2004, the Department began a consultant study to develop plans to improve vehicular and pedestrian conditions along the 2.2 mile stretch from Pennsylvania Avenue in Brooklyn to Rockaway Boulevard in Queens. The primary objective of this study was to reduce pedestrian and vehicular crashes. This portion of Atlantic Avenue is characterized by medium to high density residential land use that experience a high volume of traffic, including significant numbers of trucks. Additionally, a large number of pedestrians cross Atlantic Avenue enroute to train stations, schools and adjacent commercial land uses.

The consulting firm, Gannett Fleming Engineers and Architects, has developed traffic safety improvements to minimize pedestrian and vehicular crashes on Atlantic Avenue. The results of the study were incorporated in a Preliminary Design Investigation (PDI) completed in October 2005.

The study identified 38 intersections having had six or more crashes within the two-year analysis period. The estimated cost of the proposed improvements is $17.6 million.

The proposed improvements include a median widening similar to the improvements constructed in the adjacent section of Atlantic Avenue, east of Rockaway Boulevard. The proposal would reconfigure Atlantic Avenue from three travel lanes and one parking lane in each direction to two travel lanes and one parking lane. However, on the segment from Pennsylvania Avenue to Logan Street (the most heavily traversed section of Atlantic Avenue), the parking lane would be used during peak times as a travel lane. The number of travel lanes would be increased from two to three during the weekday AM and PM peak periods in the peak direction only (westbound in AM, eastbound in PM).

Specific improvements include:

- Widening of the raised center median on Atlantic Avenue from the existing 10 feet to an 18 foot wide median from Pennsylvania Avenue to Logan Street, providing a larger pedestrian refuge area and reduced vehicle speeds.
- A 24 foot wide median on Atlantic Avenue from Euclid Avenue to Rockaway Boulevard to provide a larger pedestrian refuge area.
- The new medians would be installed with 11 inch steel faced concrete curbs to replace severely worn curbing.
- Left turn bays at fourteen signalized intersections to improve traffic operations and safety.
- New traffic signals at the intersections of Atlantic Avenue and Ashford Street, Essex Street and Milford Street.
- Installation of secondary overhead signal heads to improve visibility of signals for motorists.
- Reduced signal offsets to a progression speed of 30 mph.
- Installation of a 4 feet high pedestrian barrier (fence) at eight locations along the median to discourage mid-block crossing and increase pedestrian safety.
- Prohibition of westbound left turns at Logan Street, diverting traffic to Milford Street.
- Restrictions on curbside parking (daylighting) within 30 feet of selected intersections to increase the visibility of pedestrians and motorists.
- Installation of overhead mounted signs near the Atlantic Avenue and Conduit Avenue interchange to better guide traffic.