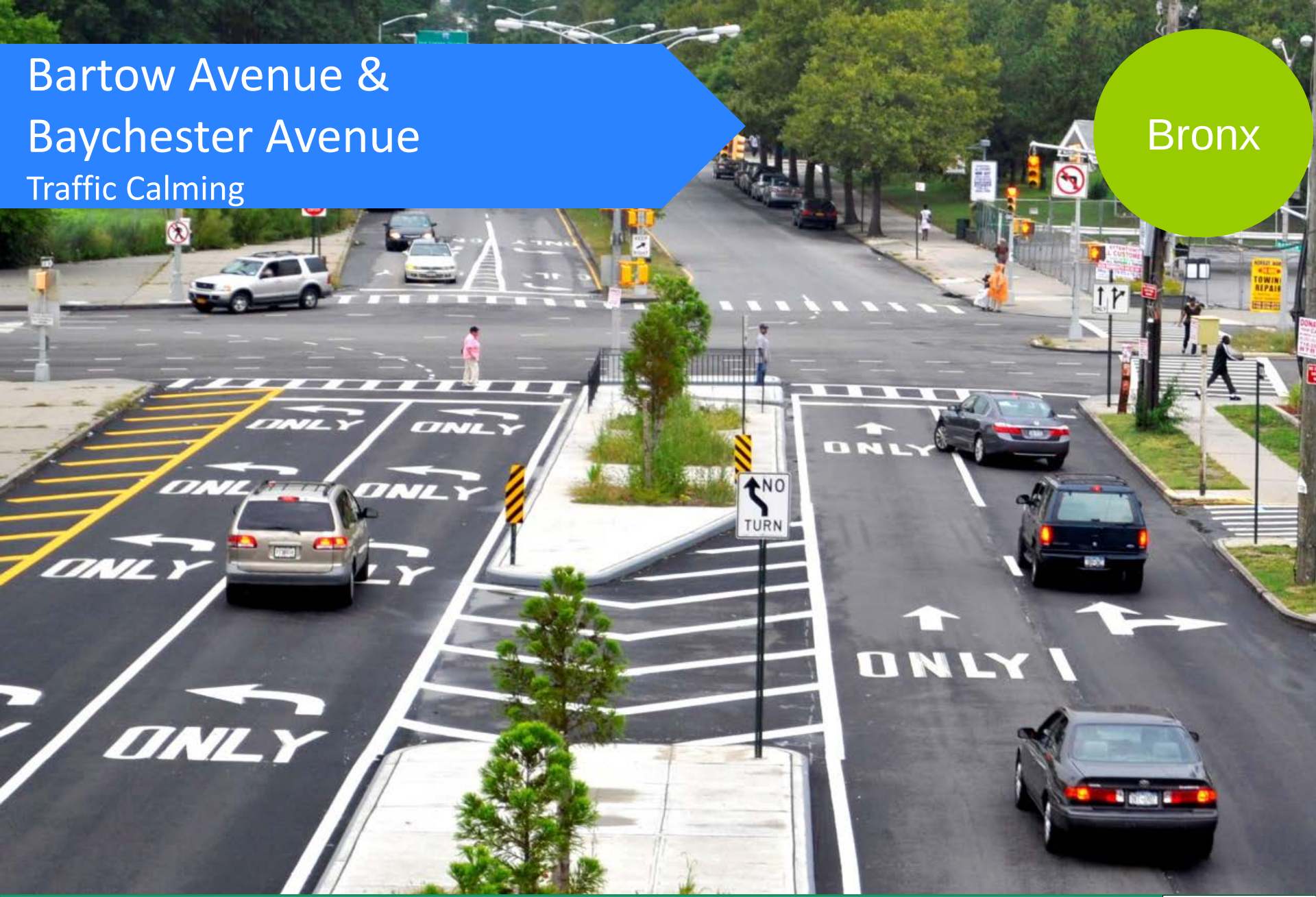
Bartow Avenue & Baychester Avenue

Traffic Calming

Bronx



New York City Department of Transportation – Polly Trottenberg, Commissioner
Final Project Evaluation Completed February 2014

NEW YORK CITY DOT

Executive Summary

DOT received requests from the community, NYPD, and elected officials for improvements at the intersection of Bartow and Baychester Avenues. The intersection already sees heavy traffic from New England Thruway Exit 11 and more traffic is anticipated from the Bay Plaza mall expansion. In response, DOT worked with CB10 and the Bay Plaza developers to create a design that accommodated the traffic and improved mobility and safety for all users. As a result, crashes and intersection delay have all decreased. Traffic is also better organized with separated, dual left turn lanes and pedestrian crossing distances have been reduced.

Baychester Ave at Bartow Ave facing south — After

Results Summary

Safety

- Total crashes decreased by 19%

Mobility

- Improved traffic operations allow the intersection to process 814 (14%) more vehicles per hour
- The new intersection design performs substantially better, reducing average delay per vehicle from 133 seconds to 44 seconds

Economic Vitality/Quality of Life

- FDNY and NYPD report no adverse effect to their operations
- "It is the sense of Bronx Community Board #10, that the improvements conducted at the above intersection have proven to be beneficial to the traffic flow and safety in the area."– Kenneth Kearns, District Manager, Bronx Community Board 10

Project Summary

Before

After

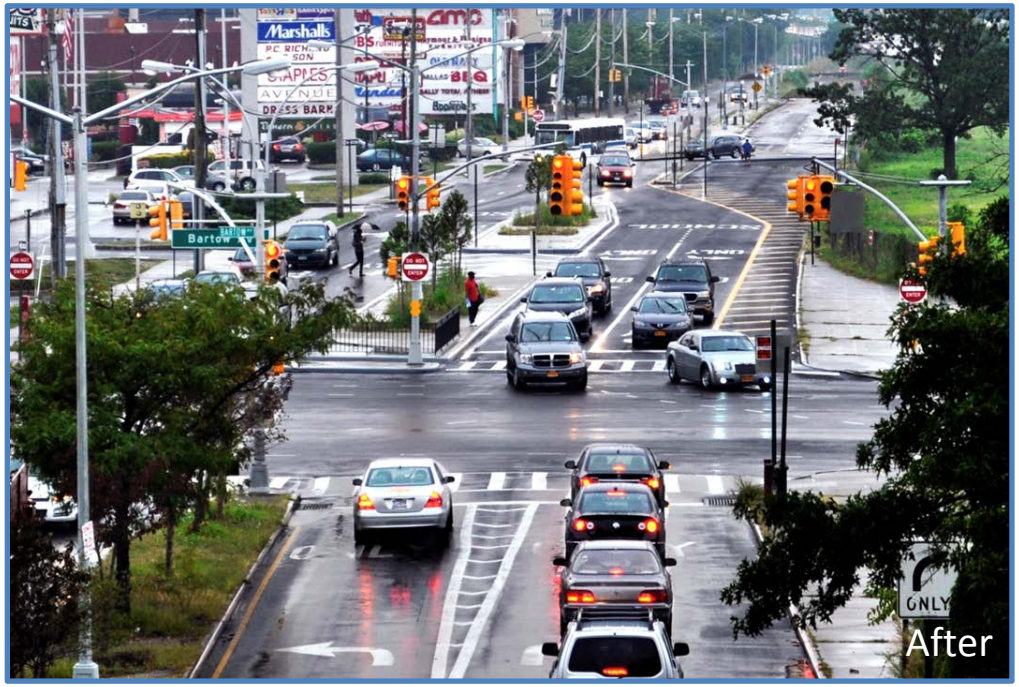
Baychester Ave at Bartow Ave facing west

Completed August 2012:

- Added two left turn lanes on NB Baychester Ave approaching Bartow Ave in previously closed roadway on Baychester Ave
- Installed landscaped pedestrian safety island on south leg of intersection
- Constructed concrete center median along Baychester Ave
- Installed pedestrian fencing to prevent midblock crossing on Baychester Ave
- Added crosswalks to driveways on Baychester Ave

Safety- Crashes and Injuries

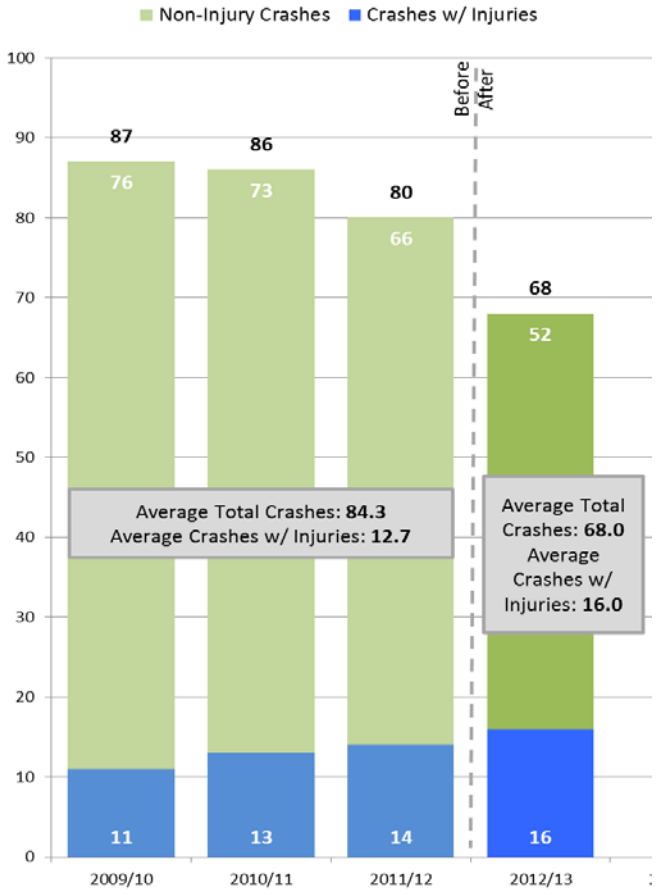
- Total crashes decreased by 19%



Baychester Ave at Bartow Ave facing south

Crashes, One-Year After Analysis

Baychester Ave (Bay Plaza Blvd to Bartow Ave)



Each before year period is the 12-month period beginning May 1 and ending April 30.The 1-yr after period is October 1, 2012 to September 30, 2013. The implementation period of May 1, 2012 to September 30, 2012 is excluded. Source: NYPD AIS/TAMS Crash Database

Safety- Crashes and Injuries

Crashes and Injuries
One-Year After Analysis

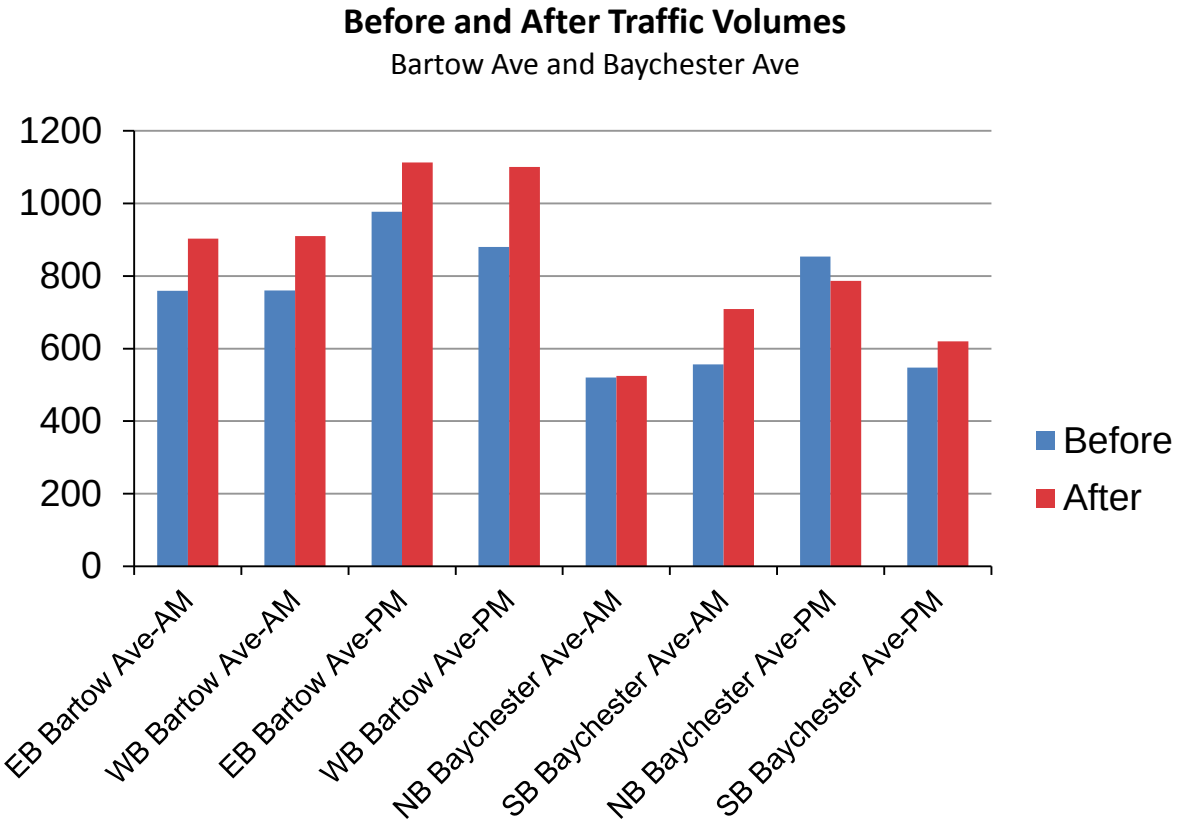
	Before			After
	'09/ '10	'10/ '11	'11/ '12	'12/ '13
Total Crashes	87	86	80	68
Crashes w/ Injuries	11	13	14	16
Motor Vehicle Occupant	10	16	18	22
Pedestrian	4	2	3	2
Cyclist	0	0	0	0
Total Injuries	14	18	21	24

Each before year period is the 12-month period beginning May 1 and ending April 30.The 1-yr after period is October 1, 2012 to September 30, 2013. The implementation period of May 1, 2012 to September 30, 2012 is excluded.
Source: NYPD AIS/TAMS Crash Database

Baychester Ave and Bartow Ave facing south

Mobility-Traffic Volumes

- Improved traffic operations allow the intersection to process 814 (14%) more vehicles per hour



Before: Average midweek peak volume week of September 6, 2010 thru September 20, 2010
After: Average midweek peak volume week of October 15, 2012

Mobility-Level of Service

- The new intersection design performs substantially better, reducing average delay per vehicle from 133 sec to 44 sec

Original Design

Intersection Approach	Movement	Volumes	Weekend		
			v/c Ratio	Avg Delay	LOS
EB: Bartow Ave	LT-3 Lane	***L = 460***	1.68	122.5	F
		T = 977	0.58		
WB: Bartow Ave	RT-3 Lane	***TR= 1277***	0.96	46.6	D
NB: Baychester Ave	L-1 Lane	***L = 499***	2.10	311.9	F
	LTR-2 Lane	***TR = 405***	0.95		
SB: Baychester Ave	LR-2 Lane	***L = 170***	0.85	56.9	E
		R = 425	0.91		
Overall Intersection				**133.4**	**F**

New Design

Intersection Approach	Movement	Volumes	Weekend		
			v/c Ratio	Avg Delay	LOS
EB: Bartow Ave	LT-3 Lane	***L = 460***	0.52	21.5	C
		T = 977	0.73		
WB: Bartow Ave	RT-3 Lane	***TR= 1277***	1.05	70.6	E
NB: Baychester Ave	L-2 Lane	***L = 499***	0.66	34.0	C
	TR-2 Lane	***TR = 405***	0.58		
SB: Baychester Ave	LR-2 Lane	***L = 170***	1.05	63.9	E
		R = 425	0.78		
Overall Intersection				**44.6**	**D**

Because this intersection is adjacent to a major shopping center, HCS analysis was conducted using average weekend volumes and turn movement data. After turn movement volumes were used for both original and new design traffic analysis to reflect actual demand for travel. After turn movement volumes collected 3/2/13.

Quality of Life-Emergency Response

- FDNY and NYPD report no adverse effect to their operations

NYPD confirmation date: December 3, 2013
FDNY confirmation date: December 3, 2013

Economic Vitality & Quality of Life

- "It is the sense of Bronx Community Board #10, that the improvements conducted at the above intersection have proven to be beneficial to the traffic flow and safety in the area."
  – Kenneth Kearns, District Manager, Bronx Community Board 10

Baychester Ave at Bartow Ave facing west