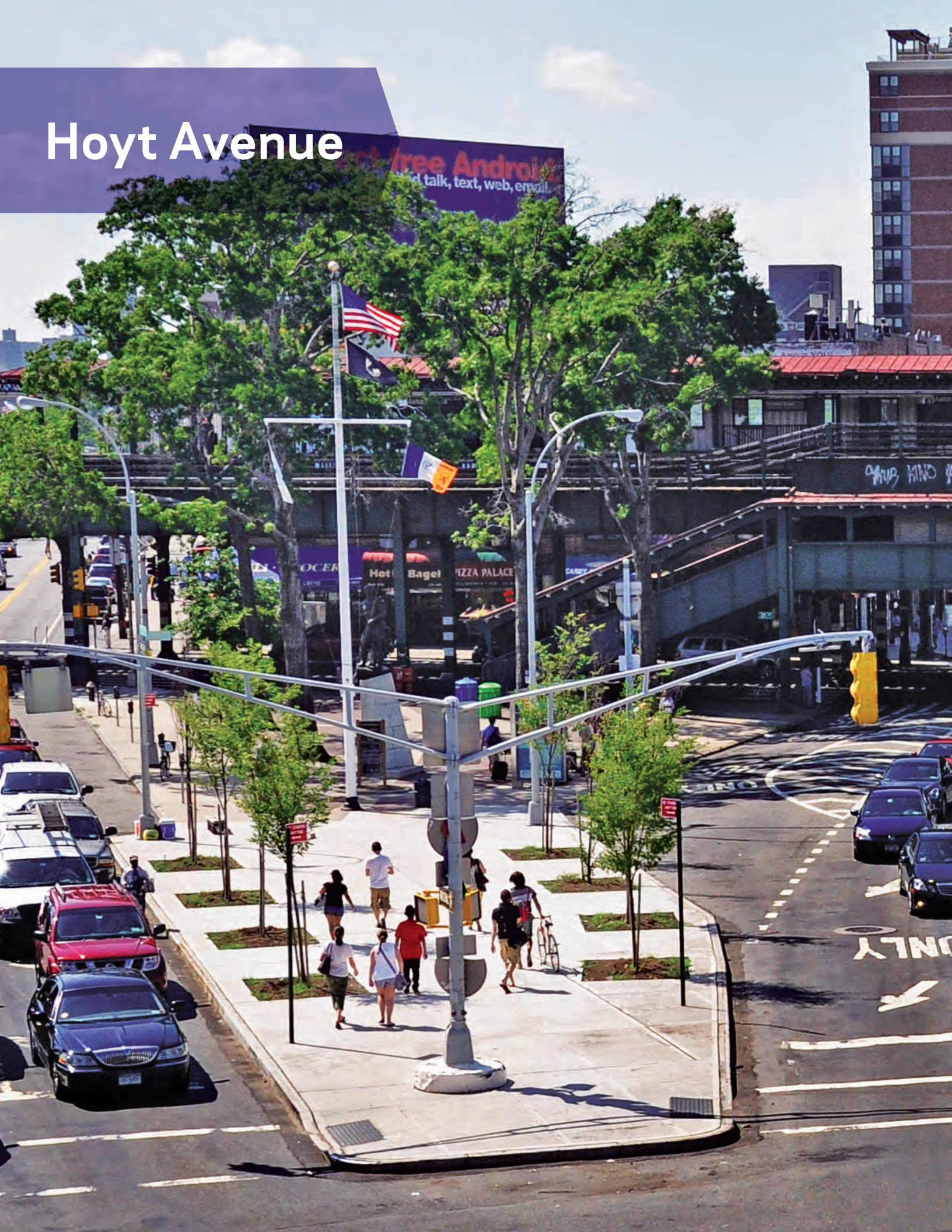


# Hoyt Avenue



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## Purpose

- Reduce traffic congestion and delays
- Enhance and improve pedestrian and bicycle connections
- Improve travel times for bus riders to/from LaGuardia Airport
- Improve pedestrian and motorist safety
- Green streets to enhance neighborhood

## Outreach

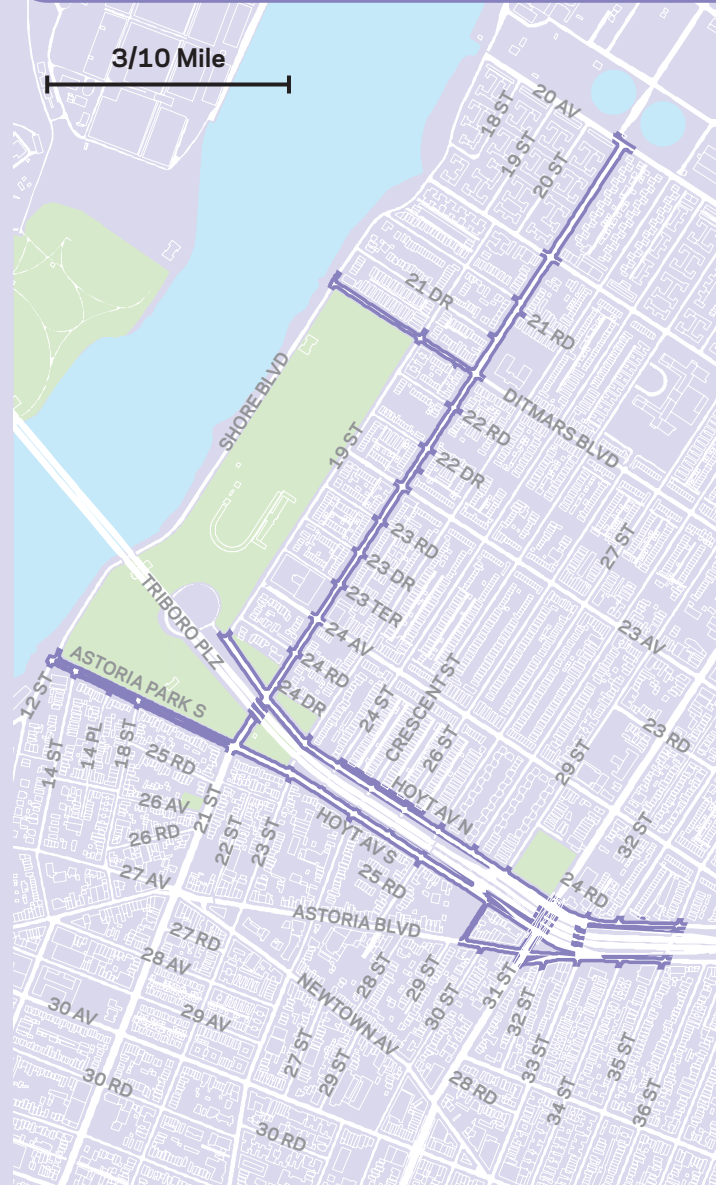
- Community requested pedestrian improvements around Astoria Boulevard subway station and RFK Bridge exit at 29th Street
- New York Metropolitan Transportation Council (NYMTC) sponsored Walkable Community Workshop held in spring 2009 with New York City Police Department (NYPD) precinct, members of Queens Community Board 1 (CB1), local parks associations, and DOT officials
- DOT presented plans to the CB1 Transportation Committee and local elected officials in May 2010 and received feedback
- DOT attended CB1 Full Board meeting to answer questions about project plans in June 2010 and received support for the plan via letter in July 2010

## Approach

- Modified signal timing and phasing to improve traffic flow, including a new bus-only phase for westbound buses
- Installed traffic signal and crosswalk at 29th St exit from RFK Bridge
- Installed rush-hour turn bans
- Built new landscaped concrete pedestrian spaces and neckdowns
- Installed bicycle lanes connecting existing lanes east and west of project area
- Added angle parking and new metered parking to support neighborhood businesses and residents

## Results

- Travel times improved on 31st Street between Astoria Boulevard South and 24th Road by 51% in the northbound direction and by 26% in southbound direction
- Bike ridership increased by 19% during weekdays and 37% during weekends on Astoria Boulevard South between 31st Street and 32nd Street
- Total number of crashes involving injuries and crashes involving injuries to motor vehicle occupants lower than any of the 10 prior years



The project is located in a section of Astoria in Queens that consists of a small commercial center surrounded by a low- and medium-rise residential neighborhood. The corridor serves as a gateway to Queens and receives Hoyt-RFK Bridge traffic bound for either the Bronx-Queens Expressway (BQE) or the Ed Koch Queensboro Bridge to Manhattan. It also provides intermodal connections from the N & Q subway stop at Astoria Boulevard to the M60 bus to La Guardia airport. The Q19 local buses connect this neighborhood to Flushing.

Located at the foot of the RFK Bridge in Astoria, the complex intersection of Hoyt Avenue North and South from 29th Street to 31st Street and Astoria Boulevard between 31st and 33rd Streets is traversed by thousands of pedestrian, transit, and vehicle commuters a day as well as travelers from LaGuardia Airport who transfer here from the bus to the subway. It serves as a transit node for two bus routes and two subway lines as well as an interchange with the Grand Central Parkway and Brooklyn-Queens Expressway. Within this complex intersection, Hoyt Avenue South and 29th Street is a key node serving motorists exiting from the bridge onto local neighborhood streets.

The intersection had several long crosswalks, unclear pedestrian pathways and erratic driving due to excess roadway capacity. Prior to implementation, pedestrians crossed multiple lanes of traffic from the subway and bus to the nearby residential neighborhoods. The south leg of the intersection of Hoyt Avenue South and 29th Street, where a senior housing facility was built in 2009, was unsignalized, creating problems for pedestrians crossing at this location as well as drivers approaching on Hoyt Avenue South looking for a gap in traffic. Astoria Boulevard between 31st and 33rd Streets lacked adequate connectivity between the subway station, bus stops, and crosswalks to the adjacent intersections. Pedestrians were walking on roadway channelization markings instead of sidewalks to reach their destinations. In addition, the Manhattan-bound M60 bus was forced to weave across several lanes of traffic to access the RFK Bridge.

As a result of these conditions, the intersection had the highest crash rate in northwestern Queens. Primary accident causes included speeding, vehicle weaving/merging, long pedestrian crossings, poor intersection geometry, and heavy vehicle and pedestrian volumes.

A “Walkable Communities” workshop, sponsored by NYMTC in November 2009, brought together local stakeholders, including members of Queens CB1, Friends of Astoria Park and Transportation Alternatives

plus NYPD and DOT staff to identify pedestrian and traffic issues. During the workshop many concerns about safety were raised, and several interesting ideas were suggested. DOT then initiated a study to develop a comprehensive redesign.

DOT met with Metropolitan Transportation Authority Bridges & Tunnels on-site several times to discuss adding a new traffic signal and pedestrian crosswalk at 29th Street. Additionally, the Department of Parks & Recreation collaborated on the addition of trees to new and expanded pedestrian safety islands. DOT then presented its findings and recommendations to elected officials as well as Queens CB1’s Transportation Committee, and made changes to the project design based on their comments. At a Queens CB1 Full Board meeting DOT answered questions and responded to earlier concerns. CB1 sent a letter approving the project and thanked DOT for including some of the Board’s suggestions in the final plan.

Project implementation began in July 2010. Improvements included signaling the intersection of Hoyt Avenue and 29th Street with corresponding changes to the bridge signage and markings and a new crosswalk with a pedestrian signal. Two new landscaped concrete pedestrian spaces were added on Astoria Boulevard between 31st Street and 33rd Street to provide sidewalks along the existing desire lines and to humanize the intersections with 15 new street trees. Two concrete “neckdowns” were also constructed to make crossings shorter and safer on 31st Street at Hoyt Avenue North and Hoyt Avenue South. Also, a right-turn signal from northbound 31st Street to eastbound Astoria Boulevard was added to give pedestrians a vehicle-free crossing.

Lane widths were narrowed to calm traffic and turn lanes were designated with markings and signage to facilitate through traffic safely moving past turning vehicles. Signal timing was modified to improve pedestrian crossing time while better organizing the signal phasing to improve traffic flow. Rush-hour left-turn bans were implemented



Two new landscaped crosswalk connections were added on Astoria Boulevard between 31st Street and 33rd Street to improve safety and enhance the streetscape.



A new signal and crosswalk were added at the intersection of Hoyt Avenue South and 29th Street to improve safety in front of a newly constructed senior housing facility.



# Travel times improved by up to 51% after implementation of signal timing adjustments, a new signal and crosswalk, turn bans and related changes.

to improve travel flow on 31st Street. A bus-priority signal was added so that buses no longer had to cross several lanes of moving traffic to access the RFK Bridge to Manhattan.

Vehicular travel times remained steady on Astoria Boulevard and on Hoyt Avenue North and South. Travel times on 31st Street between Astoria Boulevard and 24th Road improved by 51% in the northbound direction and by 26% in the southbound direction. Evening and afternoon travel times saw the most improvement.

Travel speeds on Hoyt Avenue South where the bridge exits into Astoria have improved by 13% between 7 a.m. and 7 p.m. The queue exiting the bridge is of a reasonable length. MTA staff have reported improved travel time speeds and increased service reliability to La Guardia Airport on M60 bus.

DOT installed 1.8 miles of bicycle lanes to safely connect residents to Astoria Park and the waterfront. Bicycle facilities were added on Hoyt North and South, Astoria Park South, 21st Street from Hoyt South to 20th Avenue, and Ditmars Boulevard from 21st Street to Shore Boulevard. Since the project was installed there has been a 19% increase in ridership on Astoria Boulevard South between 31st Street and 32nd Street during weekdays and a 37% increase in ridership on weekends for the same segment. The lanes calmed traffic while completing the planned bicycle network for the Astoria neighborhood.

Angle parking was added on Hoyt Avenue South between 29th Street and Crescent Street. The additional parking helped to reduce speeding on this previously overly wide

corridor. The new angle parking and new metered parking added at Columbus Triangle help to supported local businesses and residents.

Analysis of NYPD crash data shows crash rates for all crashes involving injuries, as well as those involving injuries to motor vehicle occupants and bicyclists after implementation were lower than the average for the three prior years. In addition, the annualized crash rate involving total injury crashes and crashes involving motor vehicle occupants after implementation was lower than the number of crashes in any of the 10 prior years (for crash analysis methodology, see page 68).

Overall these improvements have knitted together separate sections of the Astoria community, improved pedestrian and bicyclist safety and connectivity, provided clearer traffic patterns and better transit connections, clarified vehicular paths for motorists, and added landscaped areas in support of the City's sustainability goals.

## Bike Volumes on Astoria Boulevard South Between 31st Street and 32nd Street

	Before	After	% Change
<b>Weekday</b>	89	106	19%
<b>Weekend</b>	73	100	37%

Before data collected in June 2010. After data collected in June 2011. Volumes shown are for time period 7am-7pm.

## Weekday Travel Times (7 a.m. - 7 p.m.) Astoria Boulevard/Hoyt Avenue and 31st Street

Corridor	Before	After	Change	% Change
<b>WB Astoria Boulevard to Hoyt Avenue North (33rd Street to 27th Street)</b>	1:34	1:32	-00:02	-3%
<b>EB Hoyt Avenue South to Astoria Boulevard South (27th Street to 35th Street)</b>	2:05	1:51	-00:13	-11%
<b>EB Astoria Boulevard South (27th Street to 35th Street)</b>	3:02	3:04	00:02	1%
<b>WB Astoria Boulevard at 33rd Street to 31st Street at Astoria Boulevard South</b>	1:40	1:46	00:06	6%
<b>NB 31st Street (Astoria Boulevard South to 24th Road)</b>	1:31	0:45	-00:46	-51%
<b>SB 31st Street (24th Road to Astoria Boulevard South)</b>	0:57	0:42	-00:15	-26%

Before data collected in June 2010. After data collected in March 2011. Times shown in minutes, seconds.

## Crashes with Injuries for the Hoyt Avenue Project Area

	Before* (three previous years)			After
<b>Total Crashes with Injuries</b>	49	49	54	39.7
<b>Number of Crashes with Injuries to:</b>				
<b>Motor Vehicle Occupants</b>	41	38	42	28.6
<b>Pedestrians</b>	3	11	8	8.3
<b>Bicyclists</b>	5	0	4	2.8

\*Before columns show the crash history for each of the three years immediately prior to project implementation. After column shows number of crashes since implementation (through January 2012) at annual rate. See page 68 for further information on crash data source and analysis methodology. The sum of the three specific categories may not equal "Total Crashes with Injuries" because some crashes involved injuries in multiple categories.