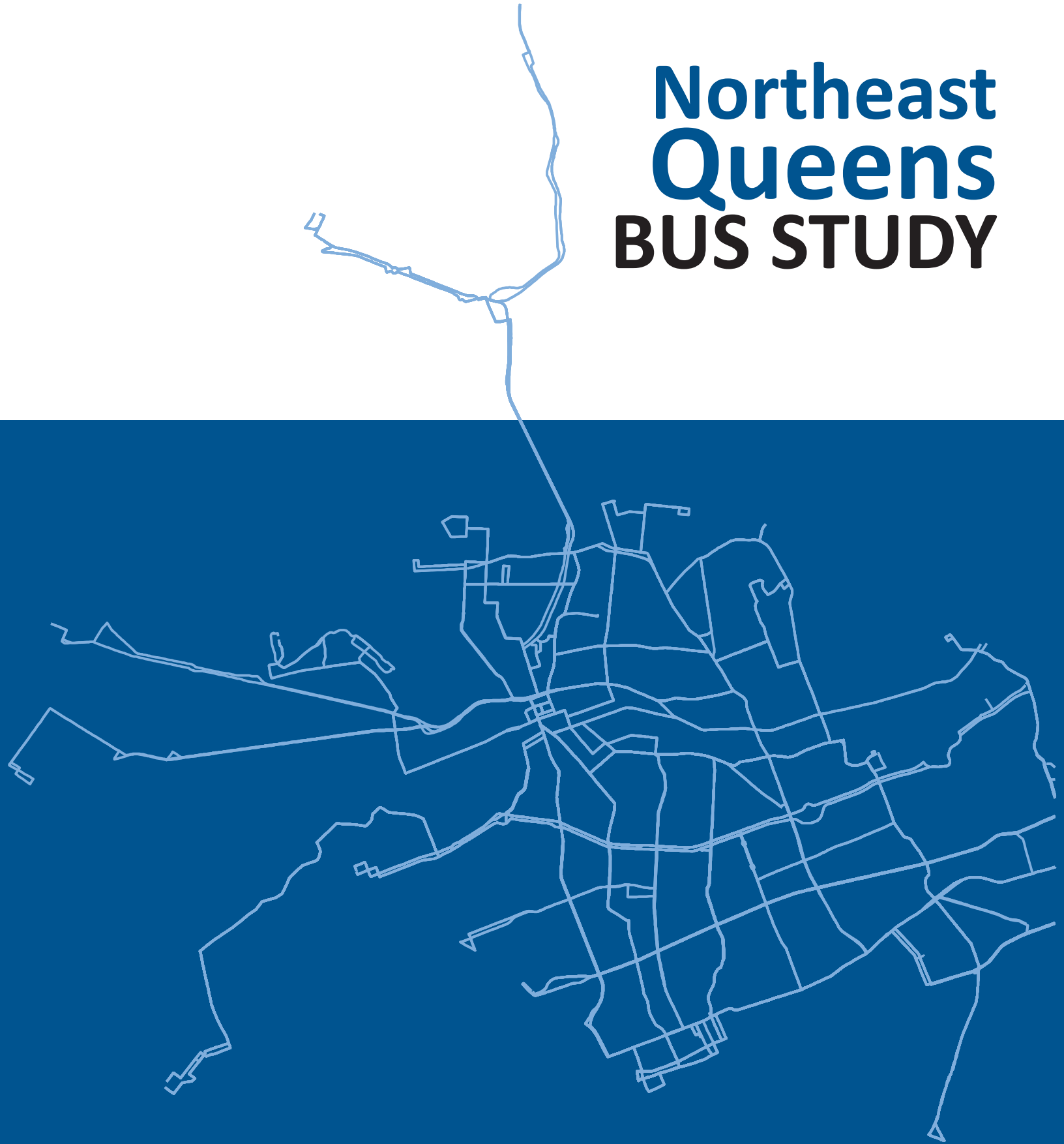


Northeast Queens BUS STUDY



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EXECUTIVE SUMMARY

The Northeast Queens Bus Study is a joint effort by the Metropolitan Transportation Authority (MTA) by two of its agencies, New York City Transit (NYCT) and the MTA Bus Company, to examine bus service in Northeast Queens. The study was requested by New York State Senator Tony Avella in 2014. A budget bill item provided funds to the MTA to study bus service in Northeast Queens neighborhoods. This comprehensive study reviewed bus service patterns and schedules, ridership data, performance indicators, and service guidelines. The study also solicited public input from community boards meetings and a public workshop.

The Northeast Queens Bus Study is one the largest bus studies conducted by the MTA. The study area contains thirty-nine local, limited, and express bus routes operated by New York City Transit and the MTA Bus Company.

The MTA received public input from meetings with the Public Transit/Transportation Committees of Queens Community Boards 7, 8, 11, and 13 and from a public workshop held at Queensborough Community College in February 2015. Further public input was received from the Office of Senator Avella and his constituents.

Key Findings

- More than 99% of the Northeast Queens study area has local and limited bus service within one-quarter mile (10 minute walk) on weekdays. Almost 98% of the Northeast Queens study area has local and limited bus service on weekends.
- Bus service in Northeast Queens is generally at or better than the MTA Board approved guideline levels of service and generally exceeds the performance of buses throughout Queens and citywide. Some areas were identified for potential improvements and are included in the study recommendations.
- Public input showed that most bus customers are concerned about the performance of existing routes, while fewer wanted new routes and services.
- Most customers that were affected by the bus service changes that were implemented in 2010 have found transportation alternatives, including other bus routes.

Recent, Ongoing, and Upcoming Bus Service Changes

Since 2012, several changes have been made to bus service in the study area. Some of these changes were the restoration of services that existed prior to 2010. Bus schedules are monitored often and adjustments are made quarterly where necessary. The first Select Bus Service (SBS) routes in Northeast Queens will be introduced in the next few months. Specific changes include:

- In September 2012, Sunday service was added on the Q76 to provide seven days/week service along Francis Lewis Boulevard and 20th Avenue.
- In January 2013, some Q30 trips were extended to Queensborough Community College to provide better service for students, staff, and residents.
- In January 2013, the Q36 was extended to the Little Neck Long Island Rail Road station. This extension replaced the former Q79 and provides weekday service on Little Neck Parkway as well as a one-seat ride to the **F** subway line on Hillside Avenue.
- In March 2014, Bus Time was implemented, allowing customers to get real-time information about the location and arrival time of buses at their bus stops.

- Additional weekday and weekend trips scheduled on most Northeast Queens bus routes since 2011.
- Select Bus Service to provide transit between Jamaica and Flushing will be implemented on the Main Street corridor in late 2015 and on the Parsons/Kissena Boulevards corridor at a later date.

Report Organization

This report is organized in seven sections covering:

- Introduction & Methodology
- Bus Service & Schedule
- Ridership
- Quality of Service
- Public Input
- Recommendations
- Next Steps

Study Recommendations

The study recommends some bus service and schedule changes in Northeast Queens, as well as a new bus service pattern. While some of these recommendations can be implemented in the short term, many of them require further analysis to determine their feasibility. Some recommendations can only be implemented once additional funding becomes available.

Short-Term Recommendations

- Modify the Q65 travel path in Flushing to provide more reliable service and to provide all-day service on Parsons Boulevard alongside the part-time Q26
- Continue to schedule additional trips such as those on the Q12, Q13, Q28, and Q58 that were added for Summer 2015 as part of ongoing schedule changes
- In conjunction with the initiation of Q44 SBS, create 24-hour service on the Q20A
- Analyze the feasibility of overnight and all-day service on the Q13, Q30, and Q88
- Continue to adjust running time on all routes to improve schedule adherence

Long-Term Recommendations

- Implement a pilot program for limited-zone bus service on a Northeast Queens bus route, possibly to include the Q12, Q17, Q27, Q43, Q46, or Q88
- Analyze the feasibility of limited-stop service on the Q12 and Q88 bus routes
- Study alternatives to expand north-south service throughout the study area
- In addition to the two SBS routes along the Flushing-Jamaica corridor, implement additional Select Bus Service along major transit corridors, possibly to include Hillside Avenue, Northern Boulevard, and Union Turnpike
- Explore creation of a Downtown Flushing Bus Terminal in conjunction with new development and redevelopment occurring in the area

1. INTRODUCTION

Northeast Queens is a large collection of neighborhoods and contains a diverse population that relies on bus service for much of its transit needs. The study area has limited subway coverage. Train service is provided by the Port Washington Branch of the Long Island Rail Road. All bus routes in Northeast Queens connect to subway or commuter rail stations.

There are thirty-nine bus routes that operate in the study area – creating a complex and expansive service coverage area. Twenty-three of these routes are operated by MTA New York City Transit and sixteen are operated by MTA Bus Company. Together, these organizations provide a range of local, limited, and express bus coverage that connect neighborhoods within Queens and to neighboring boroughs.

New York City Transit was created in 1953 by the State of New York to take over operations then operated by the New York City Board of Transportation. In 1962 the State established the Manhattan and Bronx Surface Transit Operating Authority as a subsidiary of NYCT to take over bus operations then operated by two private companies, Fifth Avenue Coach Company and Surface Transit, Inc. After this, NYCT operated local bus service in all five boroughs.

MTA Bus Company was created in September 2004 to merge into one organization the services formerly provided by seven private bus companies under franchise agreements with the City of New York. Those companies were: Command Bus, Green Bus Lines, Jamaica Bus, Liberty Lines, New York Bus Company, Triboro Coach, and Queens Surface. The transition of service began in January 2005 and was completed in February 2006. Since the merger into MTA Bus Company, the agency has instituted new maintenance practices, adjusted schedules and travel paths, and regularized service.

Methodology

This study evaluates current bus service in Northeast Queens using various sources of data and community input. These data primarily include Bus Time GPS data and Automatic Fare Collection MetroCard data.

This study examined a large amount of archived Bus Time data, integrated with Automatic Fare Collection (AFC) data from MetroCards. The data were captured and analyzed to evaluate bus service, performance, and ridership. This methodology provided service planners with a comprehensive dataset based on 100% of actual data.

Since the launch of Bus Time for Queens buses in 2014, real time automatic vehicle location information is available for all buses. These data are captured and stored to evaluate bus service, performance, and ridership, supplementing the prior system of manual data sampling with traffic counts. With the data captured from Bus Time, wait assessment and on-time performance data are calculated. These metrics, along with service availability and passenger environment scores, were evaluated to determine quality of service. Automatic Fare Collection MetroCard data provided ridership and transfer information.

Community input was received at meetings of the Public Transit/Transportation Committees of Queens Community Boards 7, 8, 11, and 13 between October 2014 and April 2015, as well as a public workshop held on February 26, 2015 at Queensborough Community College. More than 100 participants attended the Northeast Queens Bus Study Public Workshop. This provided an opportunity for community residents to speak directly to bus service planners about bus service in the area. Further comments were collected by the office of Senator Avella and forwarded to the MTA for consideration and analysis.

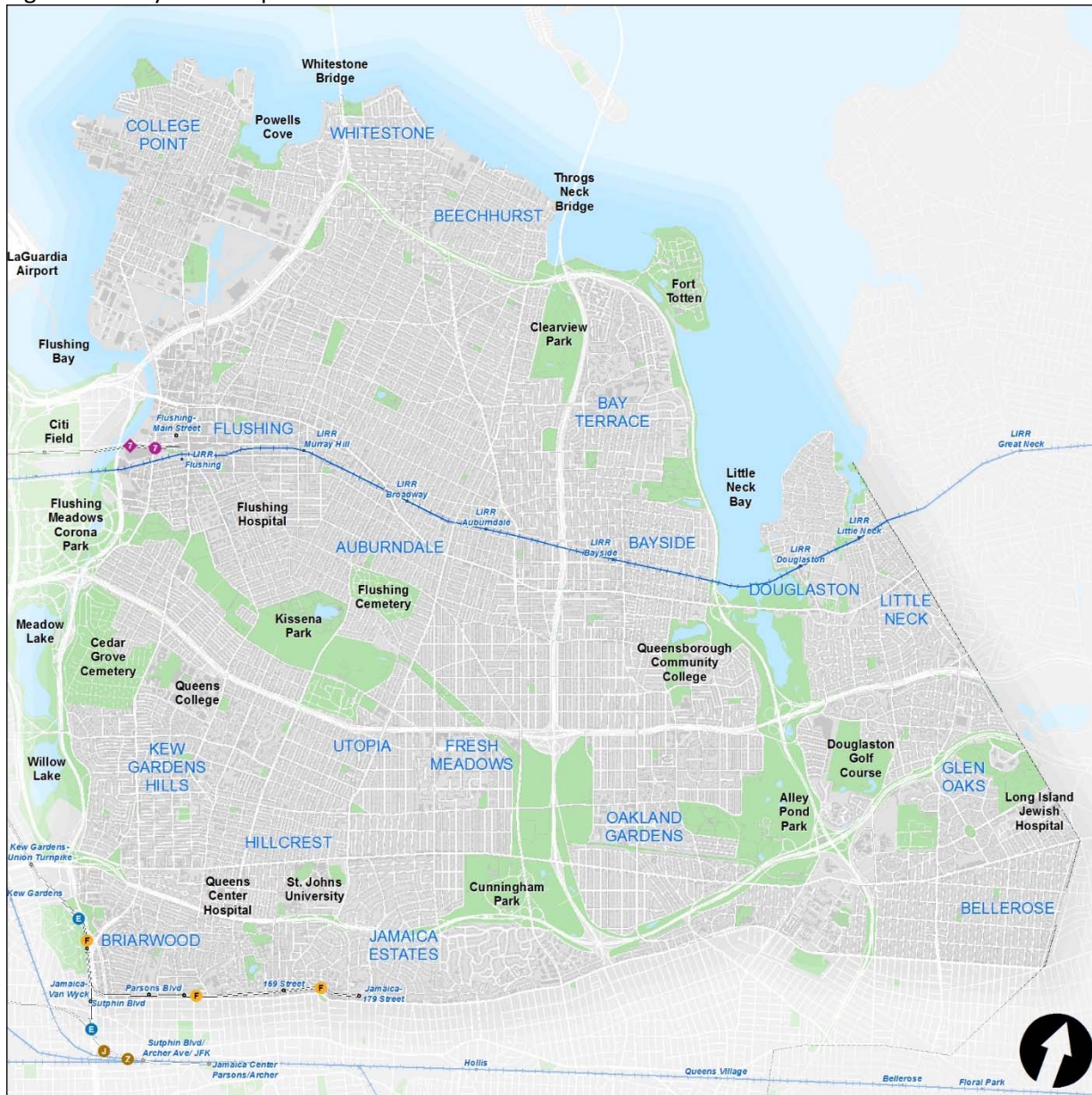
Characteristics of Northeast Queens

Northeast Queens is a large area that covers 31 square miles. The study area is bounded by Flushing Bay and the Van Wyck Expressway to the west, Hillside Avenue to the south, the Nassau County line to the east, and the East River to the north.

This study area is composed of the following neighborhoods: Flushing, Whitestone, Bay Terrace, Bayside, College Point, Oakland Gardens, Douglaston, Glen Oaks, Fresh Meadows, Little Neck, Mitchell-Linden, Bowne Park, Beechhurst, Bellerose, Fort Totten, Malba, Robinwood, Auburndale, Floral Park, Hollis Hills, Queens Village, and New Hyde Park in addition to others. Northeast Queens spans Community Boards 7,8,11, and 13. Downtown Flushing is the major economic center and transportation hub within the area.

Major educational institutions include Queens College, St. Johns University, and Queensborough Community College. There are also several large high schools within the study area. Schools are one of the largest generators of bus customers in Northeast Queens. Other community facilities and parks in the study area include Queens Botanical Garden, Kissena Park, Queens County Farm Museum and Alley Pond Park. Large institutions such as the NY Hospital Center of Queens, Long Island Jewish Hospital, Creedmoor State Hospital, and Flushing Hospital are also located in the area.

Figure 1. Study Area Map



Population/Demographics

There are 565,378 total residents living in the Northeast Queens study area, according to the 2010 Census. The area’s population increased 1.68% from 2000 to 2010, while Queens County grew 0.1% and New York City grew 2.1% over the same period. Almost 16% of Northeast Queens residents are 65 years of age and older. Only 12% of all NYC residents are in this age cohort. This age cohort grew at a faster rate in Northeast Queens than the total population from 2000 to 2010, increasing 2.34%. NYC’s elderly population grew 5.9% during this same period.

Women accounted for 52% (295,531) of residents and men accounted for 48% (269,847). Northeast Queens has a very diverse population, where 41% of the population identified as Asian, 35% identified as

White, 16% identified as Hispanic origin, 6% identified as African American, 2% identified as multiracial, and less than 1% identified as some other race.

There were 204,449 total occupied housing units in Northeast Queens. More than 53% of housing units were owner occupied, which is significantly higher than the citywide average of 31%.

Journey to Work

Automobile ownership is high in Northeast Queens. According to 2013 5-Year American Community Survey data, 74.3% of households in the study area have a vehicle available, compared to 62.8% of Queens households and 44.6% of NYC households. Figure 2 shows detailed vehicle ownership in the study area. Among workers 16 years of age and older in Northeast Queens, private vehicles were the most common mode of travel to work. Only 38.7% of Northeast Queens workers use public transportation to commute to work. This is significantly lower than the entire Queens County and New York City, where 51.7% and 55.9% of workers use public transit to commute to work. Figure 3 shows the mode of travel to work for workers 16 years of age and older.

Figure 2. Vehicles Available in NE Queens

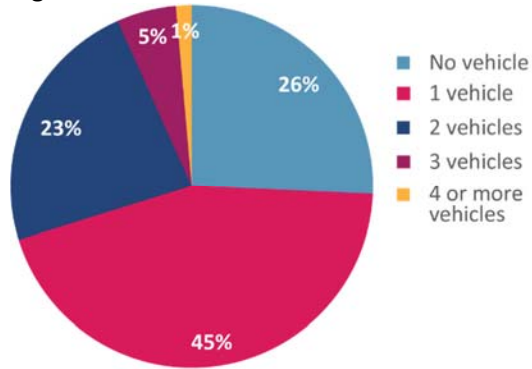
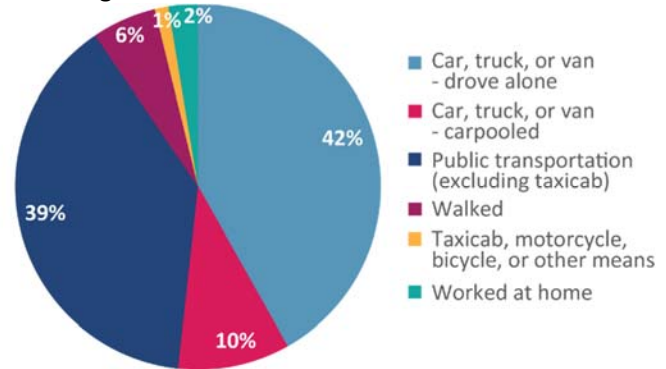


Figure 3. Mode of Travel to Work in NE Queens

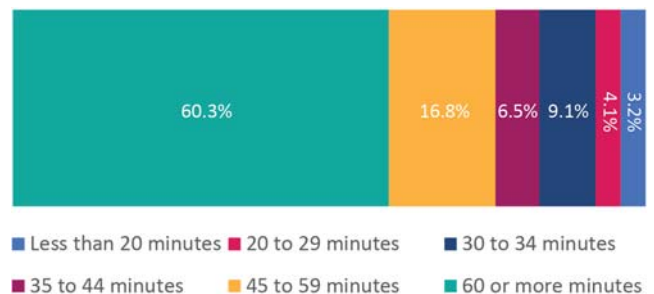


More than three-fifths of workers in Northeast Queens that use public transportation have a commute of 60 minutes or more, compared to 42.8% of Queens workers and 35.4% of workers citywide. Table 1 and Figure 4 show the travel time to work for workers 16 years of age or older that use public transportation.

Table 1. Travel Time to Work on Public Transportation in Northeast Queens

Travel Time In Minutes	NYC	Queens	NE Queens
Less Than 10 Mins	0.4%	0.4%	0.5%
10 To 14 Mins	1.0%	0.7%	0.8%
15 To 19 Mins	3.0%	1.9%	1.9%
20 To 24 Mins	7.0%	4.4%	3.1%
25 To 29 Mins	3.8%	2.5%	1.0%
30 To 34 Mins	17.5%	15.2%	9.1%
35 To 44 Mins	11.8%	11.5%	6.5%
45 To 59 Mins	19.90%	20.6%	16.8%
60 Or More Mins	35.40%	42.8%	60.3%

Figure 4. Travel Time to Work on Public Transportation in Northeast Queens



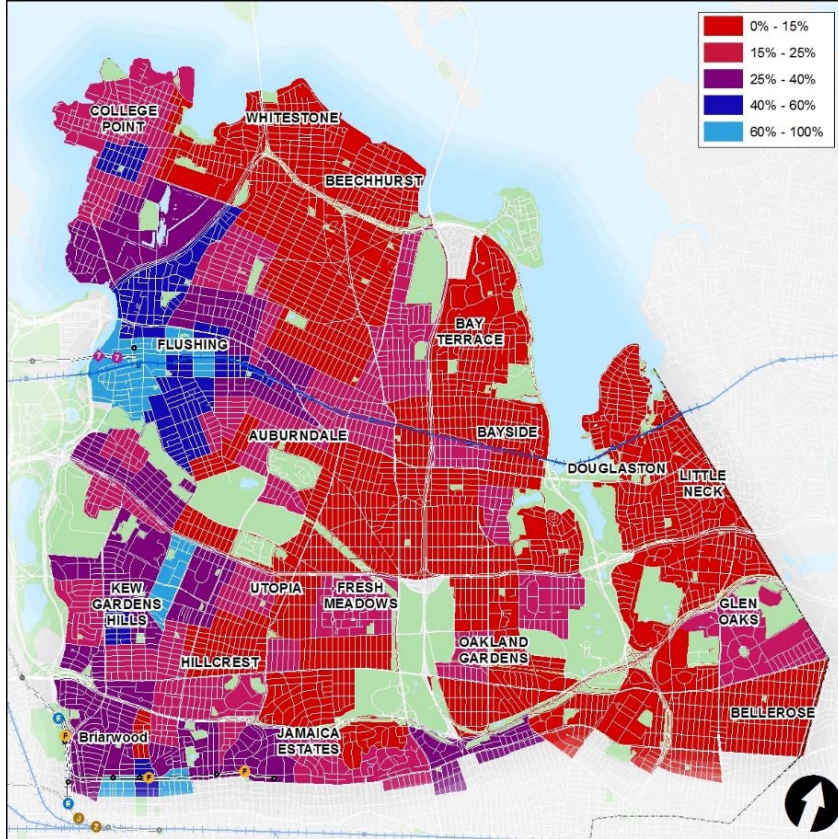


Figure 5. Transit Dependency
Transit Dependency is higher in the western areas of Northeast Queens. This is possible because of subway stations within walking distance.

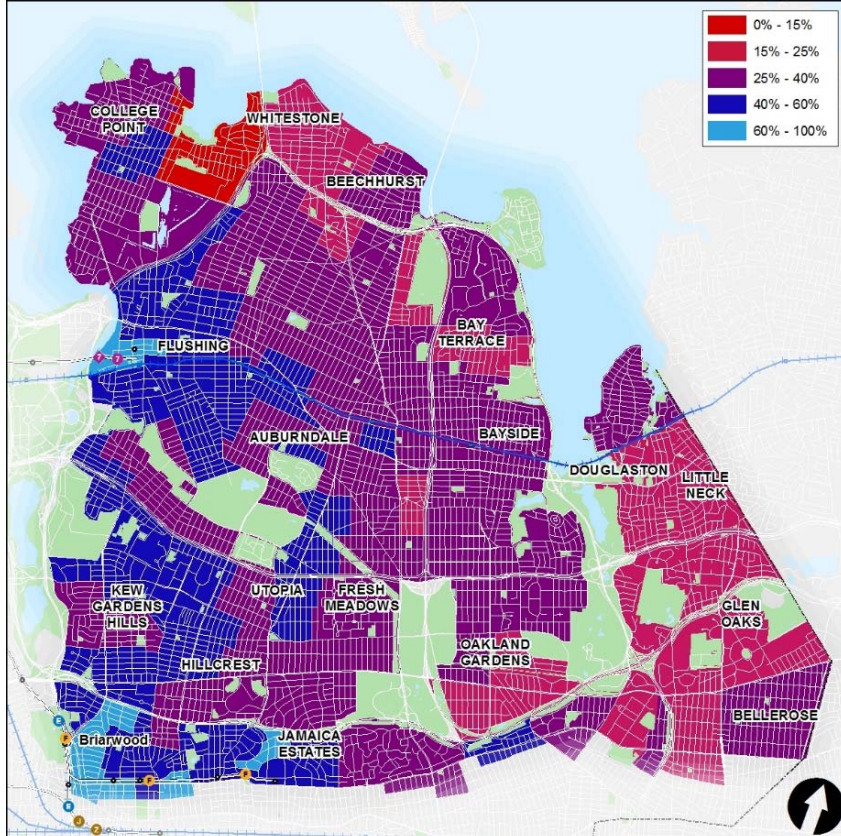


Figure 6. Transit Usage to Work
The largest percentage of workers using public transportation is in Flushing, Briarwood, Jamaica, and Kew Garden Hills.

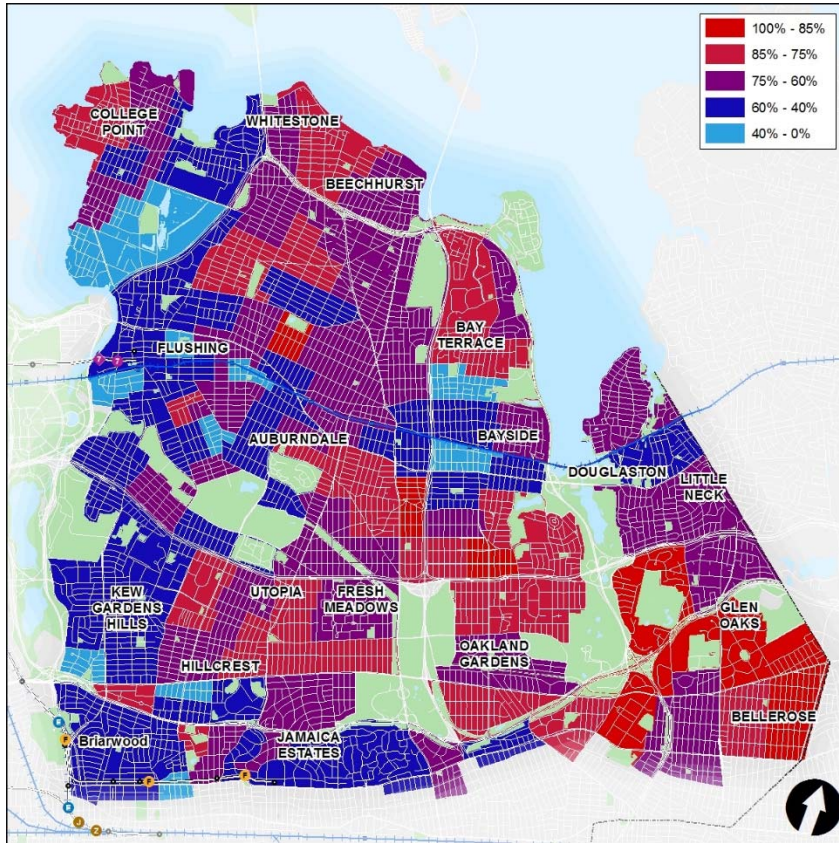


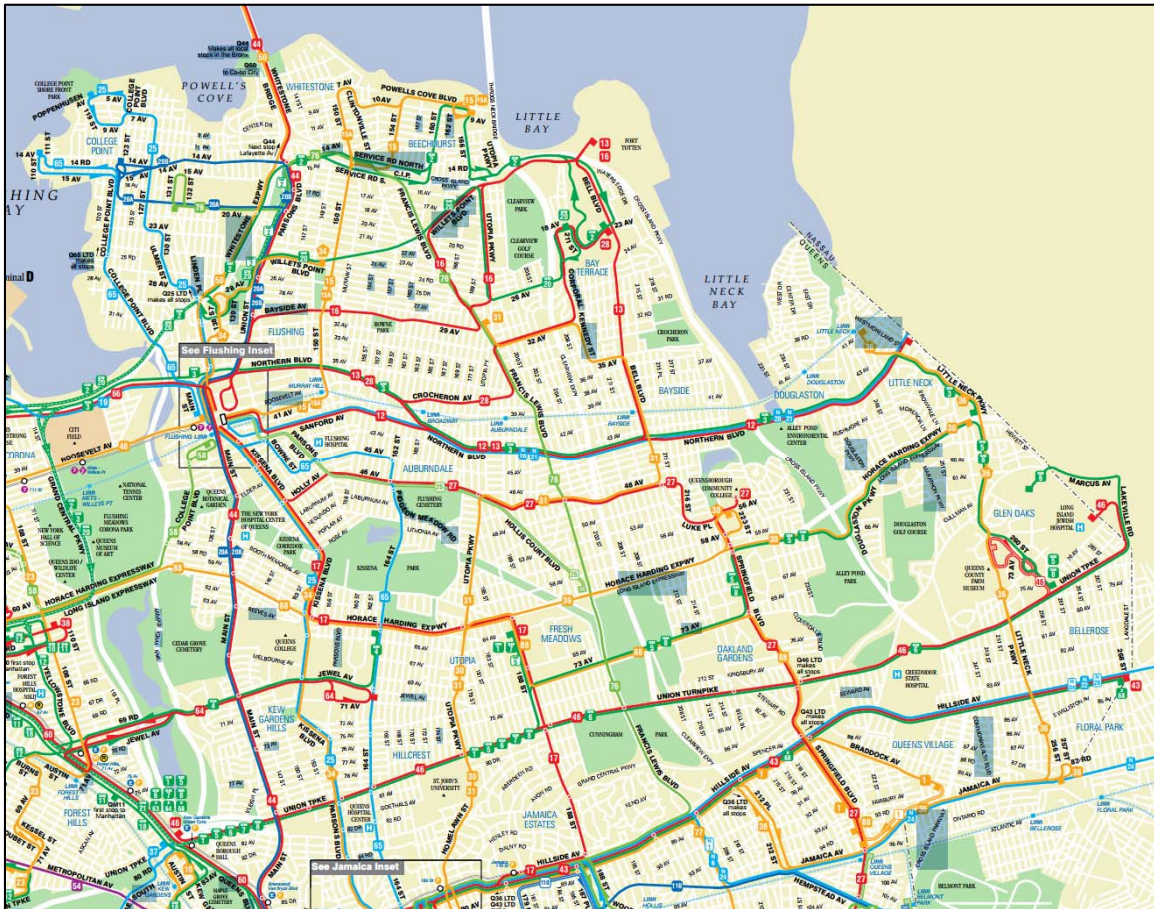
Figure 7. Workers with Transit Commutes over 60 Minutes
Transit commuters are traveling long distances, many into Manhattan. Many areas in Northeast Queens are primarily residential and therefore most of the workforce must travel outside of the area for work.

2. BUS SERVICE AND SCHEDULE

Current Service

There are thirty-nine bus routes operating in Northeast Queens. New York City Transit operates the Q1, Q12, Q13, Q15, Q15A, Q16, Q17, Q20A, Q20B, Q26, Q27, Q28, Q30, Q31, Q36, Q43, Q44, Q46, Q48, Q58, Q76, Q88, and X68 bus routes. MTA Bus Company operates the Q19, Q25, Q34, Q50, Q64, Q65, Q66, QM1, QM2, QM3, QM4, QM5, QM6, QM7, QM8, and QM20. In addition to these routes, Nassau Inter County Express (NICE) operates the N20, N21, N22, N22A, and N26 in the study area. Within Queens, NICE buses can only drop off customers coming from Nassau County and they can only pick up customers going to Nassau County. Please note that NICE buses are not operated by the MTA and for this reason are not included in the analysis for this study.

Figure 8. Northeast Queens Bus Map



Most local and limited bus routes in Northeast Queens operate completely within the study area. These bus routes often use the same streets in denser residential and commercial areas. Main Street, Kissena Boulevard, Roosevelt Avenue, Hillside Avenue, Northern Boulevard, and Union Street are major bus corridors. The majority of local and limited bus routes that extend beyond the study area boundaries terminate in Downtown Jamaica (Q1, Q17, Q20B, Q25, Q30, Q31, Q34, Q36, Q43, Q44, Q65 and Q76). Most residents rely on the subway for crosstown service to Western Queens and Manhattan, but the Q19 and Q66 provide service to Astoria and Long Island City, respectively. The Q58 extends to Ridgewood and the Brooklyn border. The Q44 and Q50

provide bus service to the Bronx. All express buses connect Northeast Queens to Midtown or Lower Manhattan.

Local Bus Service

The following twenty-seven routes provide local bus service: Q1, Q12, Q13, Q15, Q15A, Q16, Q17, Q19, Q20A, Q20B, Q25, Q26, Q27, Q28, Q30, Q31, Q34, Q36, Q43, Q46, Q48, Q58, Q64, Q65, Q66, Q76, and Q88. Local bus service constitutes the majority of bus routes in the study area. Local bus service makes all stops along a route. Most local service in Northeast Queens operates seven days a week, except the Q20B, Q26, and Q34. The Q1, Q12, Q17, Q25, Q27, Q28, Q36, Q43, Q44, Q46, Q58, Q64, Q65, and Q66 provide service at all times.



Limited Bus Service










The following eight routes provide limited-stop bus service: Q17, Q25, Q27, Q36, Q44, Q50, Q58, and Q65. All of these routes operate alongside an existing local service, except the Q50. Half of the limited bus routes in Northeast Queens operate only during the morning and evening peak periods on weekdays. The Q50 Limited and Q58 Limited operate most of the day, seven days a week. The Q44 Limited and Q65 Limited operate at all times, seven days a week. The Q44 Limited makes local stops during the overnight period.

Express Bus Service

The following ten routes provide express bus service: QM1, QM2, QM3, QM4, QM5, QM6, QM7, QM8, QM20, and X68. These routes connect Northeast Queens to Midtown, except the QM7 and QM8, which serve Lower Manhattan. The QM2, QM4, QM5, and QM6 provide service 7 days a week, while the QM1, QM3, QM7, QM8, QM20, and X68 provide weekday-only service. The QM3, QM7, QM8, and X68 provide peak direction only service in the mornings and afternoons.

Subway Access

All local and limited bus service in Northeast Queens connects to the subway system. The Q12, Q13, Q15, Q15A, Q16, Q17, Q19, Q26, Q27, Q28, Q48, Q50, Q58, and Q66 all terminate in Downtown Flushing and connect to the  Flushing-Main St station. The Q20A, Q20B, Q25, Q34, Q44, and Q65 travel from Jamaica through Downtown Flushing, connecting to the  Flushing-Main St station.

The Q20A, Q20B, Q25, Q30, Q31, Q34, Q43, Q44, and Q65 connect to the  Sutphin Blvd-Archer Av-JFK Airport station, Jamaica LIRR station, and Jamaica AirTrain station in Downtown Jamaica. All of these routes, except the Q43 also connect to the  Jamaica Center-Parsons/Archer station. The Q1, Q36, Q43, and Q76 connect to the  Jamaica-179 St and  169 St stations, the Q30 and Q31 connect to the  169 St station, and the Q25, Q34, and Q65 connect to the  Parsons Blvd station. The Q46 connects to the  Kew Gardens-Union Tpke station in Kew Gardens. The Q64 connects to the  Forest Hills-71 Ave station. The Q88 connects to the  Woodhaven Blvd station in Rego Park.

Railroad Access

In addition to subway access, several bus routes also connect to Long Island Rail Road (LIRR) stations along the Port Washington branch in the Northeast Queens study area. The Q36 connects to the Little Neck LIRR station. The Q13 and Q31 connect to the Bayside LIRR station. The Q12, Q13, and Q28 connect to the Broadway LIRR station. The Q15 and Q15A connect to the Murray

Hill LIRR station. The Q12, Q13, Q15, Q15A, Q16, Q17, Q19, Q20A, Q20B, Q25, Q26, Q27, Q28, Q34, Q44, Q48, Q50, Q58, Q65, and Q66 connect to the Flushing-Main Street LIRR station in Downtown Flushing.

The LIRR Hempstead Branch is just south of the study area. The Q36 connects to the Floral Park LIRR station along this branch. The Q1, Q27, Q36, and Q88 connect to the Queens Village LIRR station. Nine bus routes connect to the Jamaica LIRR station: the Q20A, Q20B, Q25, Q30, Q31, Q34, Q43, Q44, and Q65.

Service Coverage

MTA operates an extensive bus network in Northeast Queens with thirty-nine local, limited and express bus routes. The extent of transit coverage is determined by Service Guidelines adopted by the MTA Board.

Guidelines

The two most significant criteria in the service coverage guidelines are transit dependency and population density. Transit dependency, based on the percentage of households in an area without access to an automobile, displays an absolute need for accessible transit service. Population density, or the concentration of residents in a neighborhood, shows where service is most viable. MTA established the guidelines shown in Table 2 for local and limited bus route spacing:

Table 2. Bus Service Guidelines

Transit Dependency (Percentage Of Households W/O Automobiles)	Population Density (Persons Per Square Mile)	
	Greater Than 12,000	12,000 Or Less
Over 15%	2,000-2,600 feet (3/8- 1/2 mile) between routes	2,000-2,600 feet (3/8- 1/2 mile) between routes
15% And Under	2,000-2,600 feet (3/8- 1/2 mile) between routes	5,280 feet (1 mile) between routes

Three percent of New York City Census block groups fall into the 1-mile coverage category, with a population density less than 12,000 people per square mile and fifteen percent or less of households without a car. Average distance to a bus route is one-half the distance between routes, or one-half mile. The majority of Northeast Queens falls within the higher-density category, one-half mile between routes, based on transit dependency and population density. Average walking distance to a bus route is one-half the distance between routes, or one-quarter mile.

Other criteria sometimes come into play when determining route spacing, including geographic factors (e.g., terrain, type of the existing street network) and demographic factors (e.g., employment density, population within walking distance of a stop, significant concentrations of elderly and/or disabled persons, presence of major destinations such as hospitals, schools, or shopping).

Coverage in Northeast Queens

In the study area, bus coverage of inhabited areas was analyzed based on the one-half mile distance between bus routes – green and open spaces were not included in the analysis. Customers within the bus coverage area are within one-quarter mile (10 minute walk) of a bus route. Bus coverage in the study area was analyzed in four scenarios:

- Local/Limited Weekday Coverage
- Local/Limited Weekend Coverage
- Local/Limited Overnight Coverage
- Express/Subway/LIRR Coverage

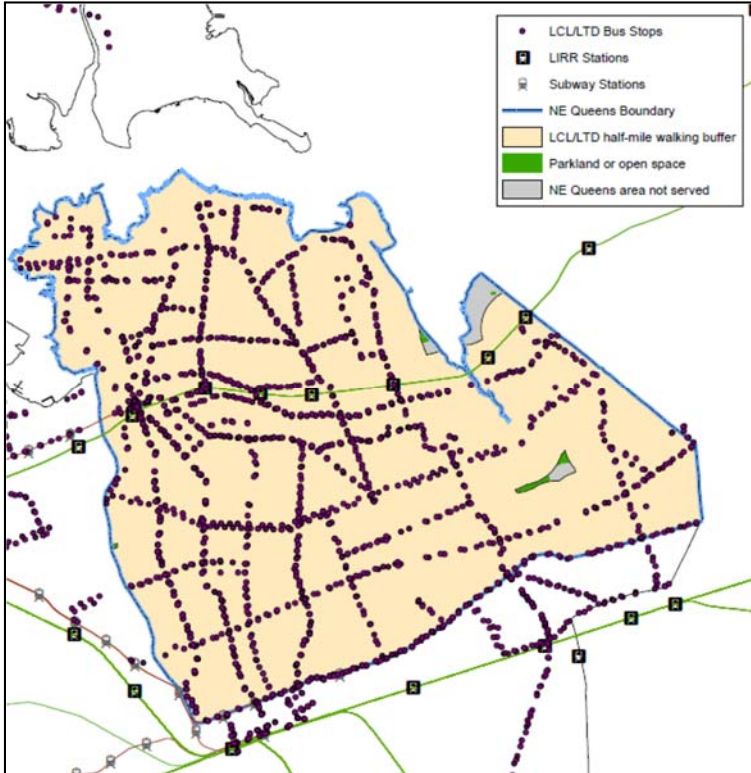


Figure 9. Local/Limited Bus Weekday Coverage
On weekdays, more than 99 percent of Northeast Queens is covered by local and/or limited bus service.



Figure 10. Local/Limited Bus Weekend Coverage
On weekends, almost 98 percent of Northeast Queens is covered by local and/or limited bus service.

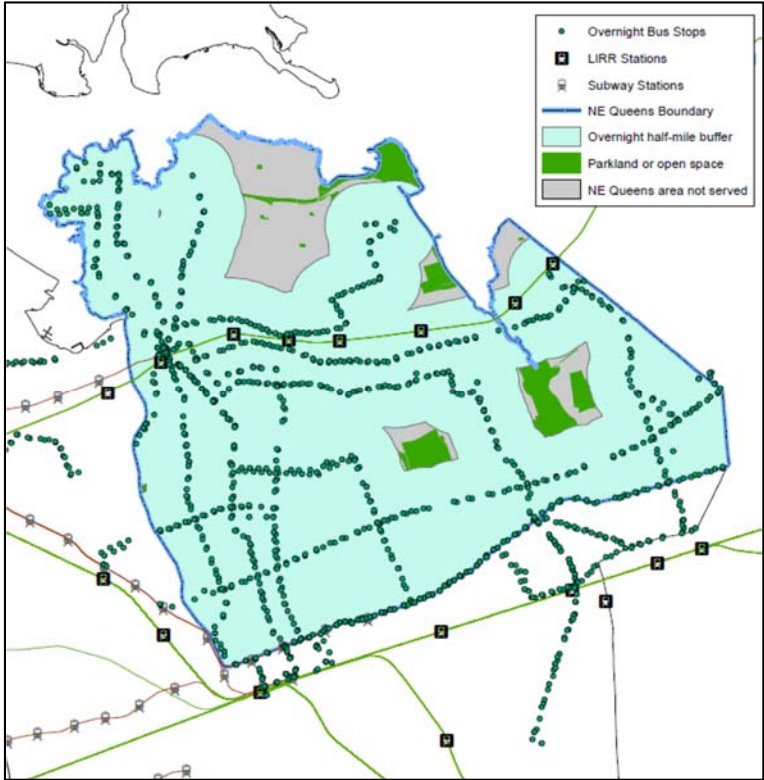


Figure 11. Local/Limited Bus Overnight Coverage
During weekday overnight periods, 92.5% of Northeast Queens is covered by local and/or limited bus service.

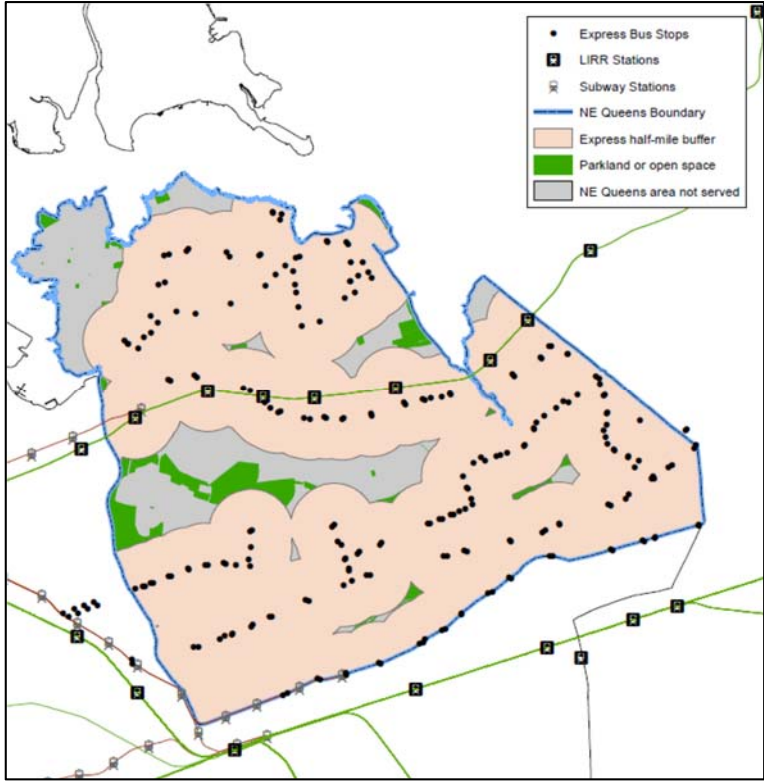
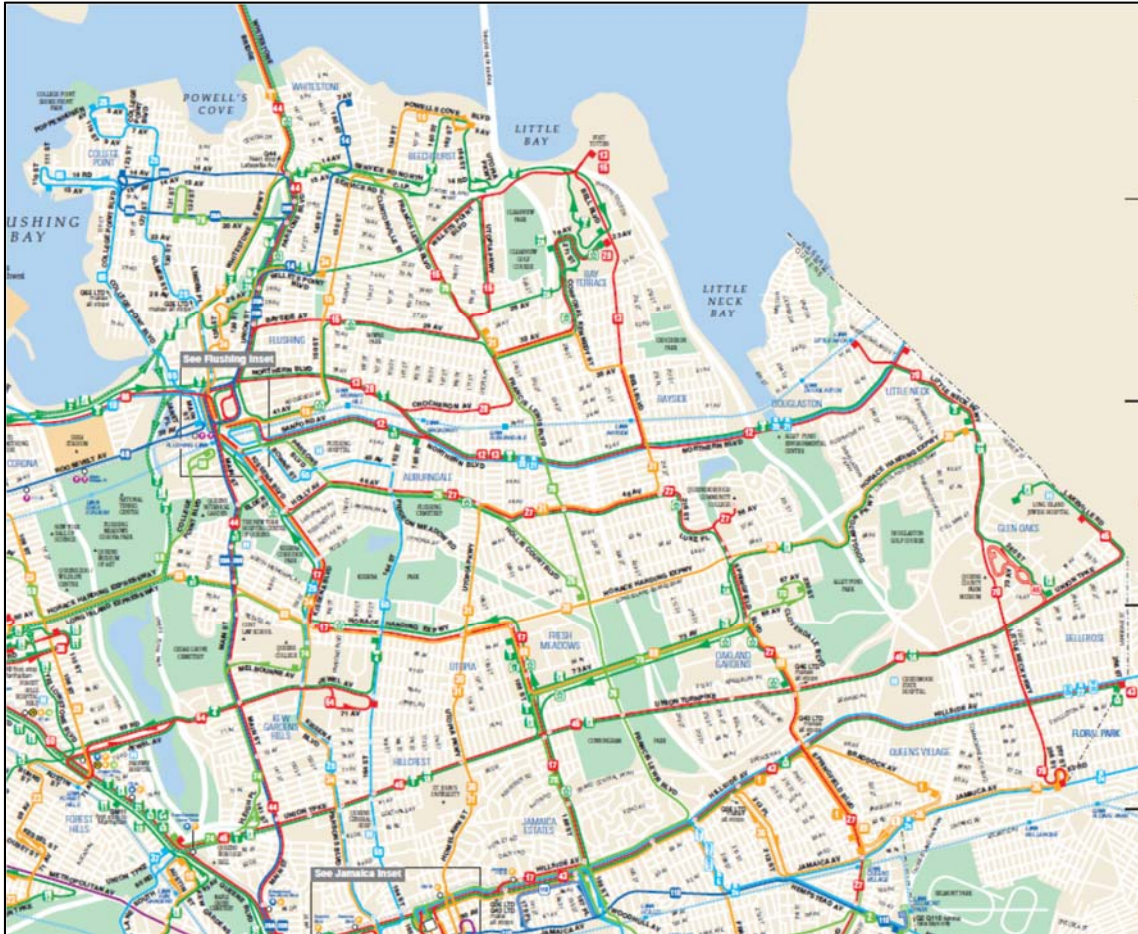


Figure 12. Commuter Service Coverage
On weekdays, 87 percent of Northeast Queens is covered by commuter service. Commuter service includes express bus, subway, and Long Island Rail Road service.

2010 Service Changes

In 2010, the MTA made service changes throughout the five boroughs. Nine routes in Northeast Queens were affected by these service changes. These routes were chosen for discontinuation, consolidation, or other adjustment for several reasons. These included duplication of service, low and declining ridership, and high operating costs. The service reductions allowed for a more efficient bus network to operate in Northeast Queens. Four services that were reduced or eliminated in 2010 have been restored.

Figure 13. 2010 Northeast Queens Bus Map



Q14

During the 2010 service reduction planning, the Q14 was initially proposed for discontinuation. The route previously provided local weekday and weekend bus service from Downtown Flushing to Whitestone via Union Street, Willets Point Boulevard, 149th Street, and 150th Street. In response to public input, instead of full discontinuation, it was consolidated into a restructured Q15. The Q14 was renamed the Q15A and shares the Q15 terminals, but runs along 150th Street and 7th Avenue in Whitestone as the Q14 did. The Q15A also travels on Clintonville Street and 10th Avenue, two streets that previously did not have Q14 bus service, before rejoining the Q15 on 154th Street. Although bus service on 149th Street is no longer available, customers can walk one block east to 150th Street for more frequent Q15 and Q15A bus service, or two blocks west for the Q20A, Q20B, or Q44. Ridership on the Q15/Q15A has increased since 2010, but levels are

still below the combined former Q14/Q15 ridership. Trips were also added in 2010 on the Q34 to accommodate Q14 customers on the lower portion of the Q14 route where the Q34 provides a nearby alternative through Parsons Boulevard and Willets Point Boulevard.


Q31 Weekend Service

The Q31 provides local bus service from Downtown Jamaica to Bayside. Weekend service on the Q31 was discontinued in June 2010. Weekend service on the Q31 was restored in April 2014.

Saturday Q76 Service

In June 2010, Saturday service on the Q76 was discontinued due to low ridership. Saturday service was restored in September 2012. Ridership has increased six percent above pre-service reductions levels, with more than 1,900 customers per Saturday. The Q76 serves several major shopping centers in Downtown Jamaica, on Francis Lewis Boulevard, and on 20th Avenue in College Point. Additionally, Sunday service was introduced in 2013 (see next page for a description of Q76 Sunday service).



Q79

The entire Q79 route was eliminated during the 2010 service changes. The Q79 had the lowest average weekday and weekend ridership of any local NYCT bus route in Queens. The Q79 provided service between Floral Park and the Little Neck LIRR station along Little Neck Parkway. In January 2013, some weekday Q36 trips were extended to the Little Neck LIRR via the previous Q79 route to serve the Floral Park, Glen Oaks, and Little Neck neighborhoods. Ridership on the extended portion of the Q36 is still low, but the route provides bus service to areas that had limited viable transit alternatives. The Q36 extension also provides a direct connection to Downtown Jamaica and  subway service on Hillside Avenue, while the former Q79 required a transfer.

Off-peak Q26 Service

The Q26 travels from Downtown Flushing to Fresh Meadows via Parsons Boulevard, 46th Avenue, and Hollis Court Boulevard. In June 2010, off peak Q26 service was discontinued. Service remained during the busy morning and evening peak travel periods. This short route shares most of its route with other buses, particularly the Q27 on 46th Avenue. A change of the travel path of the Q65 as discussed in Section 6: Recommendations will restore all-day service to the Parsons Boulevard portion of the corridor served by this route.

Q74

The Q74 connected Queens College to the   Kew Gardens-Union Tpke station on weekdays and was discontinued in 2010 due to the availability of alternate routes. The Q74 travelled along Union Turnpike and Main Street before looping around Queens College via Horace Harding Expressway, Kissena Boulevard, and Melbourne Avenue. There were almost 2,100 average weekday customers on the Q74. Most customers have switched to other bus routes, including the Q20A/B, Q40, Q46, and Q64 bus routes.

Q75



The Q75 provided local weekday service between the Jamaica-165th Street Bus Terminal and Oakland Gardens via Hillside Avenue, 188th Street, and 73rd Avenue. Almost 1,000 customers used the bus route on an average weekday. The route was discontinued in June 2010. More than half of the route duplicated service of the busier and more frequent Q17. Additionally, service on

73rd Avenue is provided by the Q88. Most former Q75 customers have switched to these two routes.

X32

The X32 had three branches that connected Downtown Jamaica, Oakland Gardens, and Bay Terrace to Bronx High School of Science via the Whitestone Bridge. The entire route was eliminated during the 2010 Service Reductions. There were only 50 daily weekday riders combined for all three branches, almost exclusively students. Most customers switched to private buses and the Q44.

X51

The X51 was an express bus route from Auburndale and Flushing to Midtown Manhattan. There were several stops around Auburndale and Flushing before continuing non-stop to Manhattan. The route was discontinued due to low ridership and because it duplicated  train service. Most former X51 customers have switched to the  train or to other buses in the area.


Other Recent & Upcoming Service Changes

Express Bus Route Names

In June 2010, the QM1 and QM1A along Union Turnpike were renamed the QM1, QM5, QM6, QM7, QM8 to distinguish the different service patterns offered by the routes. The QM1, QM5, and QM6 connect Northeast Queens to Midtown Manhattan, while the QM7 and QM8 connect Northeast Queens to Lower Manhattan. In 2011, the QM2A was renamed the QM20 to distinguish it from the QM2. Both routes provide service from Bay Terrace to Midtown.

QBx1

The QBx1 provided local bus service between Flushing, Co-op City, and Pelham Bay Park and the intermediate neighborhoods of College Point, Throgs Neck and Pelham Bay Park. The QBx1 had multiple short service patterns operating only between Pelham Bay Park and the high density residential development of Co-op City. The multiple service patterns, which varied by time of day and day of week, were confusing and did not provide a uniform and marketable service, which discouraged ridership.

The QBx1 was split into two separate services in September 2010: the limited-stop Q50 service between Flushing and Co-Op City, and the local Bx23 service between the  Pelham Bay Park station and Co-Op City. The Q50 route connects Downtown Flushing and Whitestone to areas in the Bronx including Middletown-Pelham Bay, Baychester, and Co-Op City. The travel path in Northeast Queens remains unchanged, but the Q50 previously had four different service patterns within the Co-Op City section of the Bronx that have since been regularized. The service levels provided between the study area and the Bronx have increased to provide more service as ridership has increased.

Q30 to Queensborough Community College

In January 2013, some Q30 trips were extended to Queensborough Community College. Previously, many of these trips terminated at Horace Harding Expressway and Springfield Boulevard, forcing students and staff of Queensborough Community College and Benjamin N. Cardoza High School to transfer to the Q27 or walk several long blocks to the campuses.

Sunday Q76 Service

In September 2012, Sunday service was added to the Q76 to complement the restoration of Saturday service on the route. The Q76 serves several major shopping centers in Downtown Jamaica, Francis Lewis Boulevard, and 20th Avenue. There are now almost 1,300 customers on an average Sunday.

Flushing to Jamaica Select Bus Service Corridors

Select Bus Service is New York City's version of Bus Rapid Transit: a high quality service that offers fast, frequent, and reliable service on high-ridership bus routes. Select Bus Service brings quick and cost-effective improvements to New York City's transit network, benefitting the entire city through improved mobility, cleaner air, reduced greenhouse gas emissions, and reduced congestion.

Through a comprehensive planning study and an extensive ongoing public outreach process, the MTA and the New York City Department of Transportation (NYCDOT) have identified two high ridership corridors for Select Bus Service implementation: Main Street and the Parsons/Kissena Boulevard corridor. Bus trips on the Q20A/B and Q44 Limited on Main Street and the Q25 and Q34 on Parsons/Kissena Boulevards were characterized by the community as being very long and slow, a hindrance for the 68,000 daily riders that use these bus lines.

The new Q44 SBS route will replace the Q44 Limited inter-borough service between Jamaica and the Bronx Zoo via Main Street in late 2015. The Q25 Limited will be converted into an all-day, all-week SBS route on Parsons Boulevard and Kissena Boulevard, and will follow the Q44 implementation at a later date.

Schedule Changes

In addition to service changes, there have been schedule changes since 2010/2011 that have affected the frequency of bus service. MTA staff continuously monitor ridership levels on all bus routes. As ridership increases, additional buses are added to the schedule to accommodate more passengers. As more buses are added, frequency is increased, so the headways, and therefore the waiting time, are decreased. Routes that increase in ridership thereby become more popular as more frequent service is provided, enticing even more passengers to ride the bus that comes along even more frequently.

Scheduled Trip Changes

Most routes have seen at least moderate increases in the frequency of scheduled trips on weekdays and weekends. The Q50, Q30 and Q58 have seen the largest percentage increases in local and limited trips, 29%, 24%, and 17% respectively. The reduction in frequency of Q44 trips on weekdays and weekends can be attributed to the introduction of articulated buses on the route in 2013. The longer 60-foot articulated buses can accommodate a higher number of customers on each bus and therefore requires fewer trips to handle the same ridership.

There have been significant increases in the frequency of weekend trips on many routes in Northeast Queens. The largest Saturday frequency increases were on the Q65, Q30 and Q12 at 15%, 12% and 11% respectively. Other than the Q44, decreases in frequency were only made on

the Q1, Q36, and Q76 on Saturdays. On Sundays, the Q65, Q88, and Q25/34 saw the largest increases in frequency.

Table 3. Bus Service Frequency Changes (2011 to 2015)

Route	Weekday	Saturday	Sunday	Route	Weekday	Saturday	Sunday
Q1	-2%	-1%	0%	Q48	0%	3%	0%
Q12	1%	11%	0%	Q50	29%	3%	3%
Q13	4%	5%	6%	Q58	17%	0%	9%
Q15/Q15A	3%	0%	0%	Q64	4%	4%	14%
Q16	1%	0%	0%	Q65	6%	15%	24%
Q17	1%	4%	0%	Q66	-1%	0%	18%
Q19	2%	0%	0%	Q76*	-3%	-4%	--
Q25/34	1%	8%	15%	Q88	6%	0%	21%
Q26	6%	--	--	QM1	10%	--	--
Q27	-1%	9%	2%	QM2	-7%	-6%	4%
Q28	0%	5%	0%	QM3	0%	--	--
Q30	24%	12%	0%	QM4	4%	0%	4%
Q31	-6%	0%	0%	QM5	-2%	0%	-7%
Q36	2%	-5%	-7%	QM6	5%	-3%	-7%
Q43	-3%	0%	-2%	QM7	12%	--	--
Q44*	-7%	-13%	-12%	QM8	17%	--	--
Q46	2%	0%	9%	QM20	-2%	--	--
Q48	0%	3%	0%	X68	0%	--	--

*Q20A/B combined with Q44 for Scheduled Trips

*Q76 Sunday Service began in 2014

Headway Changes

One measure of service is the frequency of buses. The more buses that are scheduled during an hour, the higher the frequency of bus service. Headways, which are minutes in between buses, are measured as the inverse of the frequency. The more buses that are scheduled during a given time period, the higher the frequency, and the lower the headways. Customers prefer frequent buses that arrive every few minutes so that they do not have to know when the next bus is scheduled to arrive. Bus Time allows customers waiting on less frequent buses to know how far away the bus is, also lowering anxiety about learning complex bus schedules. As part of the study, the average headways in 2015 were compared to the average headways from 2010 on all bus routes in Northeast Queens. Headways are presented in minutes and are based on the average time between scheduled trips during each period, and are not necessarily the exact time between scheduled trips.

Table 4. Bus Headway in Minutes (2010)

Route	Time	AM	Midday	PM
Q12	Wkd	5	12	5.5
	Sat	9	9	10
	Sun	12	10	10
Q13	Wkd	8	12	9
	Sat	10	12	12
	Sun	20	15	15
Q15/Q15A	Wkd	8	20	8
	Sat	20	20	15
	Sun	30	30	20
Q16	Wkd	8	20	10
	Sat	20	20	20
	Sun	30	20	20
Q17	Wkd	4.5	8	3.5
	Sat	8	6	6
	Sun	9	8	8
Q19	Wkd	20	20	20
	Sat	30	30	28
	Sun	30	30	28
Q20	Wkd	7	12	9
	Sat	--	--	--
	Sun	--	--	--
Q25/34	Wkd	4	6	4
	Sat	13	12	12
	Sun	24	15	15
Q26	Wkd	9	30	12
Q27	Wkd	3	5.5	3.5
	Sat	7	8	7
	Sun	10	8	9
Q28	Wkd	4	12	5
	Sat	10	12	12
	Sun	15	15	12
Q30	Wkd	9	12	12
	Sat	10	12	20
	Sun	20	20	20
Q31	Wkd	9	20	10
	Sat	30	30	20
	Sun	30	30	30
Q36	Wkd	8	20	9
	Sat	15	12	12
	Sun	30	15	15
Q43	Wkd	3.5	9	4.5
	Sat	12	12	12
	Sun	12	15	15
Q44	Wkd	3	7	4
	Sat	7	7	7
	Sun	8	7	7

Route	Time	AM	Midday	PM
Q46	Wkd	2	7	2.5
	Sat	9	9	8
	Sun	15	9	10
Q48	Wkd	12	20	15
	Sat	20	20	20
	Sun	30	20	30
Q50	Wkd	20	30	26
	Sat	30	30	30
	Sun	30	30	30
Q58	Wkd	3.5	9	5
	Sat	5	6	6
	Sun	8	7	5.5
Q64	Wkd	4	13	7
	Sat	14	15	15
	Sun	14	15	12
Q65	Wkd	7	15	14
	Sat	13	15	15
	Sun	24	17	15
Q66	Wkd	5	15	10
	Sat	15	11	10
	Sun	16	11	12
Q76	Wkd	10	20	15
	Sat	30	30	30
	Sun	--	--	--
Q88	Wkd	8	10	9
	Sat	12	12	10
	Sun	30	15	15
QM1 (part)	Wkd	20	40	45
QM2	Wkd	10	30	14
	Sat	60	60	60
	Sun	59	60	58
QM3	Wkd	30	--	30
QM4	Wkd	20	60	28
	Sat	60	60	60
	Sun	58	30	55
QM1A (part – later QM5)	Wkd	11	30	15
	Sat	60	60	60
	Sun	60	60	56
QM1A (part – later QM6)	Wkd	12	60	23
	Sat	60	60	60
	Sun	80	60	60
QM1 (part – later QM7)	Wkd	9	--	30
QM1A (part – later QM8)	Wkd	9	--	20
QM2A (later - QM20)	Wkd	11	60	14
X68	Wkd	12	--	15

*Q20A/B Saturday and Sunday service was scheduled with Q44

Table 5. Change in Bus Headway in Minutes (2010 to 2015)

Route	Time	AM	Midday	PM
Q12	Wkd	-0.5	-2	-0.5
	Sat	-1	0	-2
	Sun	0	0	-1
Q13	Wkd	0	-2	-3
	Sat	0	-2	-2
	Sun	-5	0	-3
Q15/Q15A	Wkd	-2	0	0
	Sat	-5	0	0
	Sun	0	0	0
Q16	Wkd	-2	0	-1
	Sat	0	0	0
	Sun	0	0	0
Q17	Wkd	-0.5	-1	-0.5
	Sat	0	0	0
	Sun	-1	0	-1
Q19	Wkd	-2	0	0
	Sat	0	0	2
	Sun	0	0	2
Q20	Wkd	2	0	1
	Sat	12	12	12
	Sun	15	12	12
Q25/34	Wkd	-1	0	-1
	Sat	0	-2	0
	Sun	-6	-3	0
Q26	Wkd	-1		-2
Q27	Wkd	-1	-0.5	-0.5
	Sat	-2	-2.5	-1
	Sun	-4	0	-1
Q28	Wkd	-0.5	-2	1
	Sat	0	0	-2
	Sun	0	-3	0
Q30	Wkd	-6	-5	-6.5
	Sat	2	3	-5
	Sun	0	0	0
Q31	Wkd	-2	0	0
	Sat	0	0	0
	Sun	0	0	-10
Q36	Wkd	-3	0	0
	Sat	0	3	3
	Sun	0	5	5
Q43	Wkd	-1	-1	-1
	Sat	-2	-2	-2
	Sun	3	0	-3
Q44	Wkd	2	3	3
	Sat	1	2	1
	Sun	0	2	2
Q46	Wkd	0	-1	-0.5
	Sat	-1	-1	0
	Sun	-5	0	-1
Q48	Wkd	0	0	0
	Sat	-5	0	0
	Sun	0	0	0
Q50	Wkd	-4	0	-10
	Sat	0	0	0
	Sun	0	0	0
Q58	Wkd	-1	-1	-0.5
	Sat	0.5	0	-0.5
	Sun	-2	-1.5	0
Q64	Wkd	0	-3	-3
	Sat	0	-3	-3
	Sun	0	-3	0
Q65	Wkd	-3	-5	-8
	Sat	-1	-3	-3
	Sun	0	-2	0
Q66	Wkd	0	-4	-3
	Sat	0	0	0
	Sun	0	0	0
Q76	Wkd	2	0	0
	Sat	0	0	0
	Sun	30	30	30
Q88	Wkd	0	-2	0
	Sat	3	-3	0
	Sun	-10	-3	-3
QM1	Wkd	0	20	-17
QM2	Wkd	0	0	0
	Sat	0	0	0
	Sun	1	0	2
QM3	Wkd	0	--	0
QM4	Wkd	0	0	0
	Sat	0	0	0
	Sun	2	30	5
QM5	Wkd	0	0	0
	Sat	0	0	0
	Sun	0	0	4
QM6	Wkd	-2	0	0
	Sat	0	0	0
	Sun	-20	0	0
QM7	Wkd	1	--	-4
QM8	Wkd	2	--	0
QM20	Wkd	-2	0	2
X68	Wkd	3	--	--

*Q76 Sunday Service began in 2014

Table 6. Bus Headway in Minutes (2015)

Route	Time	AM	Midday	PM
Q12	Wkd	4.5	10	5
	Sat	8	9	8
	Sun	12	10	9
Q13	Wkd	8	10	6
	Sat	10	10	10
	Sun	15	15	12
Q15/Q15A	Wkd	6	20	8
	Sat	15	20	15
	Sun	30	30	20
Q16	Wkd	6	20	9
	Sat	20	20	20
	Sun	30	20	20
Q17	Wkd	4	7	3
	Sat	8	6	6
	Sun	8	8	7
Q19	Wkd	18	20	20
	Sat	30	30	30
	Sun	30	30	30
Q20	Wkd	9	12	10
	Sat	12	12	12
	Sun	15	12	12
Q25/34	Wkd	3	6	3
	Sat	13	10	12
	Sun	18	12	15
Q26	Wkd	8	--	10
Q27	Wkd	2	5	3
	Sat	5	5.5	6
	Sun	6	8	8
Q28	Wkd	3.5	10	6
	Sat	10	12	10
	Sun	15	12	12
Q30	Wkd	3	7	5.5
	Sat	12	15	15
	Sun	20	20	20
Q31	Wkd	7	20	10
	Sat	30	30	20
	Sun	30	30	20
Q36	Wkd	5	20	9
	Sat	15	15	15
	Sun	30	20	20
Q43	Wkd	2.5	8	3.5
	Sat	10	10	10
	Sun	15	15	12
Q44	Wkd	5	10	7
	Sat	8	9	8
	Sun	8	9	9

Route	Time	AM	Midday	PM
Q46	Wkd	2	6	2
	Sat	8	8	8
	Sun	10	9	9
Q48	Wkd	12	20	15
	Sat	15	20	20
	Sun	30	20	30
Q50	Wkd	16	30	16
	Sat	30	30	30
	Sun	30	30	30
Q58	Wkd	2.5	8	4.5
	Sat	5.5	6	5.5
	Sun	6	5.5	5.5
Q64	Wkd	4	10	4
	Sat	14	12	12
	Sun	14	12	12
Q65	Wkd	4	10	6
	Sat	12	12	12
	Sun	24	15	15
Q66	Wkd	5	11	7
	Sat	15	11	10
	Sun	16	11	12
Q76	Wkd	12	20	15
	Sat	30	30	30
	Sun	30	30	30
Q88	Wkd	8	8	9
	Sat	15	9	10
	Sun	20	12	12
QM1	Wkd	20	60	28
QM2	Wkd	10	30	14
	Sat	60	60	60
	Sun	60	60	60
QM3	Wkd	30	--	30
QM4	Wkd	20	60	28
	Sat	60	60	60
	Sun	60	60	60
QM5	Wkd	11	30	15
	Sat	60	60	60
	Sun	60	60	60
QM6	Wkd	10	60	23
	Sat	60	60	60
	Sun	60	60	60
QM7	Wkd	10	--	26
QM8	Wkd	11	--	20
QM20	Wkd	9	60	16
X68	Wkd	15	--	15

3. BUS RIDERSHIP

This section analyzes the actual regular use of bus service within Northeast Queens to provide an understanding of how transit in the area is utilized by the public, and potentially highlight areas for further analysis for service improvements.

3-Year Ridership Trend

Weekday Local & Limited Ridership

Local and limited weekday bus ridership in Northeast Queens grew 2.8% from 2011 to 2014. During the same period, citywide local and limited bus ridership was steady. The decline from 2.47 million average daily riders in 2011 to 2.45 million average daily riders in 2014 constitutes a 0.4% decline. Ridership on the Q50 increased 37.6% from 2011 to 2014. Also, Q19 and Q25 weekday ridership experienced 31% and 13% increases from 2011 to 2014, respectively. The largest percentage decline in ridership occurred on the Q31. Other routes that saw significant decreases in weekday ridership include the Q17, Q26, Q43, and Q13.

Table 7. Weekday Local & Limited 3-Year Ridership (2011 to 2014)

Route	2011 Average	2014 Average	Change from 2011 to 2014
	Weekday Ridership	Weekday Ridership	
Citywide	2,465,142	2,454,461	-0.4%
Queens	704,979	714,570	0.01%
NE Queens	307,819	316,589	2.8%
Q1	4,731	4,709	-0.5%
Q12	10,828	10,815	-0.1%
Q13	9,111	8,706	-4.4%
Q15	5,615	5,738	2.2%
Q16	3,982	4,021	1.0%
Q17	19,105	17,530	-8.2%
Q19	2,365	3,088	30.6%
Q20	13,150	13,452	2.3%
Q25	17,336	19,567	12.9%
Q26	1,509	1,438	-4.7%
Q27	24,567	24,935	1.5%
Q28	9,956	9,905	-0.5%
Q30	9,679	10,155	4.9%
Q31	6,320	5,709	-9.7%
Q34	6,880	7,218	4.9%
Q36	5,444	5,874	7.9%
Q43	16,008	15,368	-4.0%
Q44	28,143	28,139	0.0%
Q46	22,593	22,196	-1.8%
Q48	2,629	2,673	1.7%
Q50	3,225	4,439	37.6%
Q58	26,563	29,464	10.9%
Q64	10,200	10,253	0.5%

Q65	18,724	20,685	10.5%
Q66	12,535	14,105	12.5%
Q76	5,818	5,711	-1.8%
Q88	10,803	10,695	-1.0%

Weekend Local & Limited Ridership

Most local and limited bus routes in the study area saw percentage increases in Saturday and Sunday ridership from 2011 to 2014. Saturday ridership increased 4.5% and Sunday ridership increased 9.4% for all Northeast Queens local bus routes during this period. The largest percentage increases in Saturday ridership were on the Q50, Q65, and Q66, which increased 35.1%, 21.1%, and 19.3%, respectively. The Q1, Q36, and Q13 saw the largest percentage declines in ridership. The largest percentage increases on Sunday ridership were seen on the Q19, Q65, and Q25 routes. Those routes increased 42.1%, 39.8%, and 25.8% respectively. Only four local bus routes in Northeast Queens saw declines in Sunday ridership from 2011 to 2014. Ridership decreased 11.9% on the Q30, 4.3% on the Q1, 1.1% on the Q20, and 0.3% on the Q43.

Table 8. Weekend Local & Limited 3-Year Ridership (2011 to 2014)

Route	2011 Average	2014 Average	Change from 2011 to 2014	2011 Average	2014 Average	Change from 2011 to 2014
	Saturday Ridership	Saturday Ridership		Sunday Ridership	Sunday Ridership	
Q1	2,895	2,675	-7.6%	2,204	1,941	-11.9%
Q12	7,861	8,168	3.9%	6,555	6,848	4.5%
Q13	6,660	6,211	-6.7%	4,355	4,399	1.0%
Q15	3,134	3,084	-1.6%	1,917	1,949	1.7%
Q16	1,962	1,870	-4.7%	1,310	1,364	4.1%
Q17	12,609	11,934	-5.4%	10,478	10,170	-2.9%
Q19	1,445	1,691	17.1%	1,047	1,185	13.1%
Q20	7,497	8,081	7.8%	6,065	6,590	8.6%
Q25	11,303	13,359	18.2%	8,089	10,255	26.8%
Q27	13,455	13,731	2.1%	9,705	10,245	5.6%
Q28	5,772	5,802	0.5%	4,360	4,452	2.1%
Q30	3,981	4,004	0.6%	2,541	2,613	2.8%
Q31*	--	1,150	--	--	756	--
Q36	3,423	3,166	-7.5%	2,407	2,266	-5.9%
Q43	8,012	8,209	2.5%	5,650	5,810	2.8%
Q44	20,119	20,044	-0.4%	17,346	18,024	3.9%
Q46	9,905	9,732	-1.7%	7,551	7,676	1.6%
Q48	2,215	2,330	5.2%	1,750	1,881	7.5%
Q50	2,043	2,760	35.1%	1,559	2,187	40.3%
Q58	21,392	22,717	6.2%	17,206	19,201	11.6%
Q64	3,747	4,018	7.2%	3,073	3,696	20.3%
Q65	9,058	10,970	21.1%	6,062	8,396	38.5%
Q66	7,806	9,314	19.3%	6,104	8,039	31.7%
Q88	5,320	5,534	4.0%	3,201	3,588	12.1%

*Q31 weekend service was restored in April 2014, data represents 9 month period from April to December 2014.

Express Ridership

Express buses in Northeast Queens carried almost 10,000 customers on an average weekday in 2014. Express bus weekday ridership in Northeast Queens increased two percent between 2011 and 2014. The QM8, QM6, and QM1 saw the largest percentage increases in ridership during this time. During the same period, citywide express bus ridership declined. The decline from just over 78,000 average citywide daily riders in 2011 to just over 74,000 average citywide daily riders in 2014 constitutes a 5% decline. The only decrease in weekday express bus ridership in Northeast Queens was on the QM7, which lost almost four percent of its customers. As in most areas of New York City, express bus service predominantly serves a weekday commuter ridership; however, four of the 11 express buses in the study area also provide weekend service: the QM2, QM4, QM5, and QM6. Large increases on Saturdays and Sundays were seen on all routes, except the QM4, which lost customers over the 3-year period.

Table 9. Weekday Express 3-Year Ridership (2011 to 2014)

Route	2011 Average Weekday Ridership	2014 Average Weekday Ridership	2011 - 2014 Change
QM1	597	626	4.8%
QM2	1,916	1,922	0.3%
QM3	130	133	2.6%
QM4	809	813	0.5%
QM5	2,034	2,071	1.8%
QM6	1,050	1,115	6.1%
QM7	770	740	-3.9%
QM8	571	632	10.8%
QM20	1,115	1,120	0.5%
X68	591	599	1.4%

Table 10. Weekend Express 3-Year Ridership (2011 to 2014)

	2011 Average	2014 Average	Change from 2011 to 2014	2011 Average	2014 Average	Change from 2011 to 2014
	Saturday Ridership	Saturday Ridership		Sunday Ridership	Sunday Ridership	
QM2	361	417	15.6%	221	269	21.8%
QM4	148	145	-2.2%	104	99	-4.5%
QM5	287	376	31.0%	181	246	36.2%
QM6	232	267	15.2%	163	190	16.5%

1-Year Ridership Trend

Weekday Ridership

From 2013 to 2014, weekday ridership on local buses in Northeast Queens decreased 0.6%. The largest percentage declines were seen on the Q76, Q48, and Q88. While most Northeast Queens routes lost ridership, a few routes increased ridership from 2013 to 2014. Weekday ridership on the Q50 increased 9.2% during this period, while ridership increased 5.3% on the Q19 and 3.9% on the Q66.

Table 11. Weekday Local & Limited 1-Year Ridership (2013 to 2014)

Route	2013 Average Weekday Ridership	2014 Average Weekday Ridership	2013 - 2014 Change
Q1	4,718	4,709	-0.2%
Q12	11,185	10,815	-3.3%
Q13	8,899	8,706	-2.2%
Q15	5,799	5,738	-1.0%
Q16	4,153	4,021	-3.2%
Q17	17,985	17,530	-2.5%
Q19	2,933	3,088	5.3%
Q20	13,609	13,452	-1.2%
Q25	19,324	19,567	1.3%
Q26	1,464	1,438	-1.8%
Q27	25,014	24,935	-0.3%
Q28	10,218	9,905	-3.1%
Q30	10,205	10,155	-0.5%
Q31	5,881	5,709	-2.9%
Q34	7,054	7,218	2.3%
Q36	5,933	5,874	-1.0%
Q43	15,738	15,368	-2.4%
Q44	28,689	28,139	-1.9%
Q46	22,737	22,196	-2.4%
Q48	2,790	2,673	-4.2%
Q50	4,063	4,439	9.2%
Q58	28,967	29,464	1.7%
Q64	10,361	10,253	-1.0%
Q65	20,227	20,685	2.3%
Q66	13,575	14,105	3.9%
Q76	5,975	5,711	-4.4%
Q88	11,078	10,695	-3.5%

Weekend Ridership

Saturday ridership on local buses in Northeast Queens increased 0.1% and Sunday ridership increased 3.3% from 2013 to 2014. Similar to weekdays, weekend ridership increased the most on the Q50 and Q19. Saturday ridership increased 12.2% on the Q50 and 11% on the Q19. Sunday ridership on the Q50 increased 14.6% and 12.3% on the Q19. The Q30, Q13, and Q46 saw the largest decreases in percentage of Saturday ridership from 2013 to 2014. Sunday ridership decreased in percentage the most on the Q30, Q36, and Q13.

Table 12. Weekend Local & Limited 1-Year Ridership (2013 to 2014)*

Route	2013 Average	2014 Average	2013 - 2014 Change	2013 Average	2014 Average	2013 - 2014 Change
	Saturday Ridership	Saturday Ridership		Sunday Ridership	Sunday Ridership	
Q1	2,695	2,675	-0.7%	1,951	1,941	-0.5%
Q12	8,183	8,168	-0.2%	6,877	6,848	-0.4%
Q13	6,483	6,211	-4.2%	4,469	4,399	-1.6%
Q15	3,106	3,084	-0.7%	1,933	1,949	0.8%
Q16	1,889	1,870	-1.0%	1,338	1,364	2.0%
Q17	12,150	11,934	-1.8%	9,964	10,170	2.1%
Q19	1,523	1,691	11.0%	1,055	1,185	12.3%
Q20	8,123	8,081	-0.5%	6,456	6,590	2.1%
Q25	12,910	13,359	3.5%	9,437	10,255	8.7%
Q27	13,670	13,731	0.4%	10,071	10,245	1.7%
Q28	5,919	5,802	-2.0%	4,427	4,452	0.6%
Q30	4,220	4,004	-5.1%	2,769	2,613	-5.6%
Q36	3,222	3,166	-1.8%	2,359	2,266	-4.0%
Q43	8,190	8,209	0.2%	5,736	5,810	1.3%
Q44	20,120	20,044	-0.4%	17,149	18,024	5.1%
Q46	10,072	9,732	-3.4%	7,620	7,676	0.7%
Q48	2,268	2,330	2.7%	1,902	1,881	-1.1%
Q50	2,460	2,760	12.2%	1,908	2,187	14.6%
Q58	22,831	22,717	-0.5%	18,684	19,201	2.8%
Q64	4,052	4,018	-0.9%	3,597	3,696	2.7%
Q65	10,543	10,970	4.1%	7,846	8,396	7.0%
Q66	9,104	9,314	2.3%	7,336	8,039	9.6%
Q76	1,994	2,066	3.6%	1,358	1,403	3.3%
Q88	5,539	5,534	-0.1%	3,382	3,588	6.1%

* There is no weekend service on the Q26 and Q34. Weekend service on the Q31 was restored in April 2014.

Express Bus Ridership

Weekday ridership on Northeast Queens express buses increased 0.5% from 2013 to 2014. The QM4, QM5, and QM8 had the largest percentage increases in ridership over the one-year period, gaining 3.7%, 5.5%, and 3.1%, respectively. Of the four express bus routes operating on weekends, all saw increases in ridership. The most significant increase was seen on Sundays on the QM5, which gained 22.8% additional customers from 2013 to 2014. The largest increase in Saturday ridership was seen on the QM6.

Table 13. Weekday Express 1-Year Ridership (2013 to 2014)

Route	2013 Average	2014 Average	2013 - 2014
	Weekday Ridership	Weekday Ridership	Change
QM1	670	626	-6.5%
QM2	1,957	1,922	-1.8%
QM3	152	133	-12.5%
QM4	784	813	3.7%
QM5	1,963	2,071	5.5%
QM6	1,111	1,115	0.4%
QM7	737	740	0.4%
QM8	614	632	3.1%
QM20	1,148	1,120	-2.4%
X68	591	599	1.4%

Table 14. Weekend Express 1-Year Ridership (2013 to 2014)

Route	2013 Average	2014 Average	2013 - 2014 Change	2013 Average	2014 Average	2013 - 2014 Change
	Saturday Ridership	Saturday Ridership		Sunday Ridership	Sunday Ridership	
QM2	395	417	5.6%	257	269	4.8%
QM4	133	145	9.0%	94	99	5.0%
QM5	354	376	6.2%	200	246	22.8%
QM6	242	267	10.2%	187	190	1.4%

Senior/Student Ridership

On an average weekday in Northeast Queens, senior and disabled customers accounted for 8.3% of bus customers and Students accounted for 14.1% of bus customers. In comparison, 14.5% of Queens and 11.2% of citywide bus customers were senior and disabled, and 8.5% of customers in Queens and 11.4% of customers citywide were students. The Q13 had the largest share of senior and disabled customers at 12.9%, followed by the Q20 (11.8%), Q28 (11.1%), Q16 (10.9%), and Q34 (10.7%). The Q31 had the smallest share of senior and disabled customers, but the largest percentage of student customers at 34.2%. Other routes that had high percentages of student ridership were the Q76 (28.9%), Q88 (26.3%), and Q30 (21.6%). Combined seniors, disabled customers, and students made up almost 40% of Q31 customers, the highest of all Northeast Queens bus routes.

Table 15. Weekday Senior/Disabled and Student Ridership

Route	2014 Senior and Disabled		2014 Student		2014 Total
	Average Weekday Ridership	% of Total Ridership	Average Weekday Ridership	% of Total Ridership	Average Weekday Ridership
Q1	369	7.8%	528	11.2%	4,709
Q12	1,023	9.5%	725	6.7%	10,815
Q13	1,119	12.9%	623	7.2%	8,706
Q15	547	9.5%	474	8.3%	5,738
Q16	438	10.9%	348	8.7%	4,021
Q17	1,611	9.2%	2,514	14.3%	17,530

Q19	245	7.9%	394	12.8%	3,088
Q20	1,582	11.8%	2,031	15.1%	13,452
Q25	1,395	7.1%	2,377	12.1%	19,567
Q26	98	6.8%	117	8.1%	1,438
Q27	1,913	7.7%	4,133	16.6%	24,935
Q28	1,102	11.1%	1,903	19.2%	9,905
Q30	581	5.7%	2,197	21.6%	10,155
Q31	299	5.2%	1,952	34.2%	5,709
Q34	776	10.7%	976	13.5%	7,218
Q36	478	8.1%	609	10.4%	5,874
Q43	1,301	8.5%	2,536	16.5%	15,368
Q44	2,177	7.7%	4,171	14.8%	28,139
Q46	1,646	7.4%	2,329	10.5%	22,196
Q48	213	8.0%	141	5.3%	2,673
Q50	343	7.7%	403	9.1%	4,439
Q58	2,241	7.6%	3,786	12.8%	29,464
Q64	698	6.8%	595	5.8%	10,253
Q65	1,577	7.6%	2,226	10.8%	20,685
Q66	1,116	7.9%	2,021	14.3%	14,105
Q76	440	7.7%	1,648	28.9%	5,711
Q88	856	8.0%	2,809	26.3%	10,695

Bus Stop Usage

Bus Stop Usage ridership data is estimated through Automated Fare Collection (AFC) data from MetroCard swipes to determine a rider's point of entry (boardings) and exit (alightings) on buses. This information is then used to estimate overall ridership information along bus routes. Bus Time GPS records provide Automatic Vehicle Location (AVL) data in 30-second intervals. By merging AFC data with Bus Time AVL data, and with the time of payment and position of that bus at the time of payment, the points of entry are estimated. Points of exit can be determined based on the next payment location when using a MetroCard swipe, when known. In other cases, riders are distributed to alighting locations based on observed boarding and alighting trends.

Due to the availability of information, sometimes narrowing down the points of entry and exit will be more difficult. In these cases, designated points of entry and exit are assigned based on best estimate probabilities. Reviewing the estimations on an aggregated basis (e.g., monthly basis) yields more accurate information than on a single day basis. Cash payments and fare evasion are also included in determining ridership numbers based on observed data.

Boardings and Alightings

The boarding and alighting locations of Northeast Queens passengers have been estimated and the most significant stops are shown in the following figures. Boarding and alighting locations show an increasing quantity of ridership in the western section of Northeast Queens, with a clear relationship between bus use and other transit infrastructure (subway). Weekday AM bus boardings and alightings are shown in Figures 14 and 15. When considering overnight service, the stops near subways emerge as even more important to Northeast Queens customers. Overnight bus boardings and alightings maps are located in Appendix C: Additional Data.

Figure 14. Local Weekday Bus Boardings (6AM to 9AM)

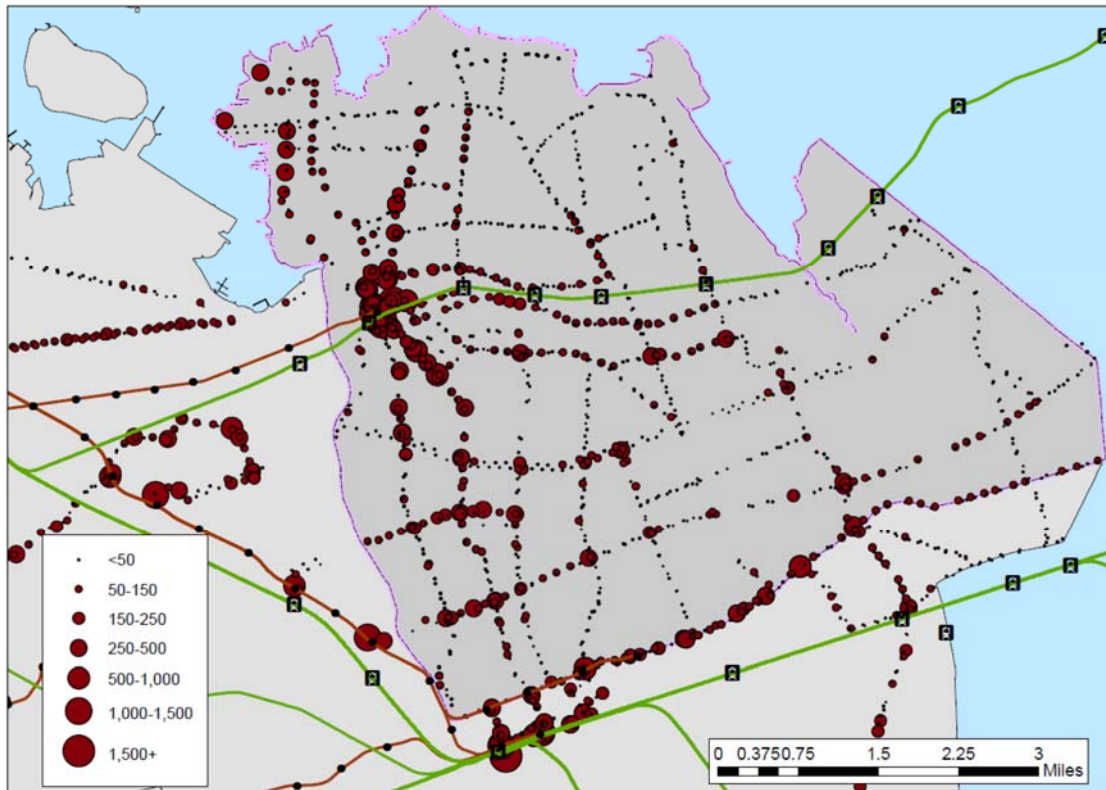
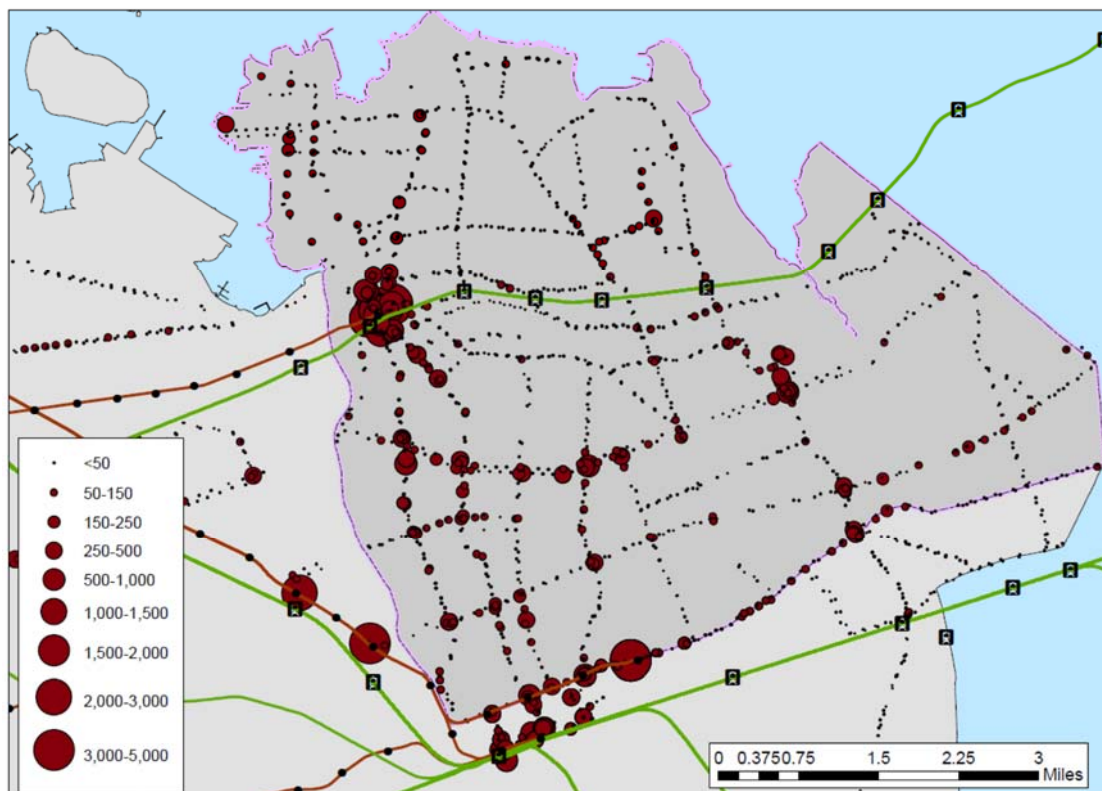


Figure 15. Local Weekday Bus Alightings (6AM to 9AM)



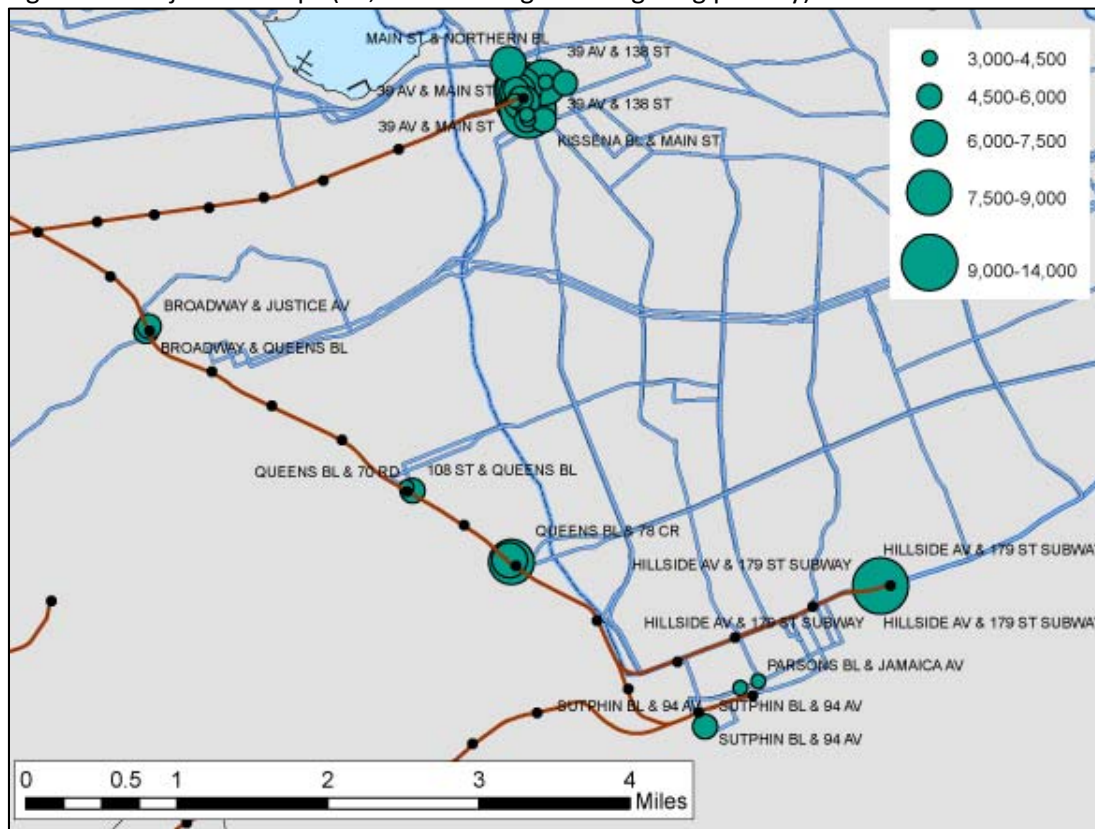
The ten busiest bus stops and bus stops with greater than 3,000 boardings and alightings for an average weekday are presented in Table 16. The busiest bus stops are all located near subway stations. Eight of the ten busiest bus stops in Northeast Queens are located in Downtown Flushing. One stop is located in Jamaica and the remaining stop is in Kew Gardens, where the Q46 connects to the subway.

Table 16. Ten Busiest Bus Stops in Northeast Queens

Stop Name	Total Daily Boarding	Total Daily Alighting	Total Stop Utilization
Main St & Roosevelt Av	13,144	14,780	27,923
39 Av & Main St	0*	16,982	16,982
39 Av & 138 St	6,636	8,063	14,699
Main St & 39 Av	6,529	5,769	12,298
Kissena Bl & Main St	9,471	1,505	10,976
Hillside Av & 179 St Subway	399	8,817	9,216
41 Rd & Main St	4,236	4,805	9,041
Queens Bl & 78 Cr	0*	8,885	8,885
Roosevelt Av & Main St	7,600	884	8,484
Kissena Bl & Sanford Av	3,027	5,309	8,336

*These stops are located at terminals, therefore, all customers are alighting.

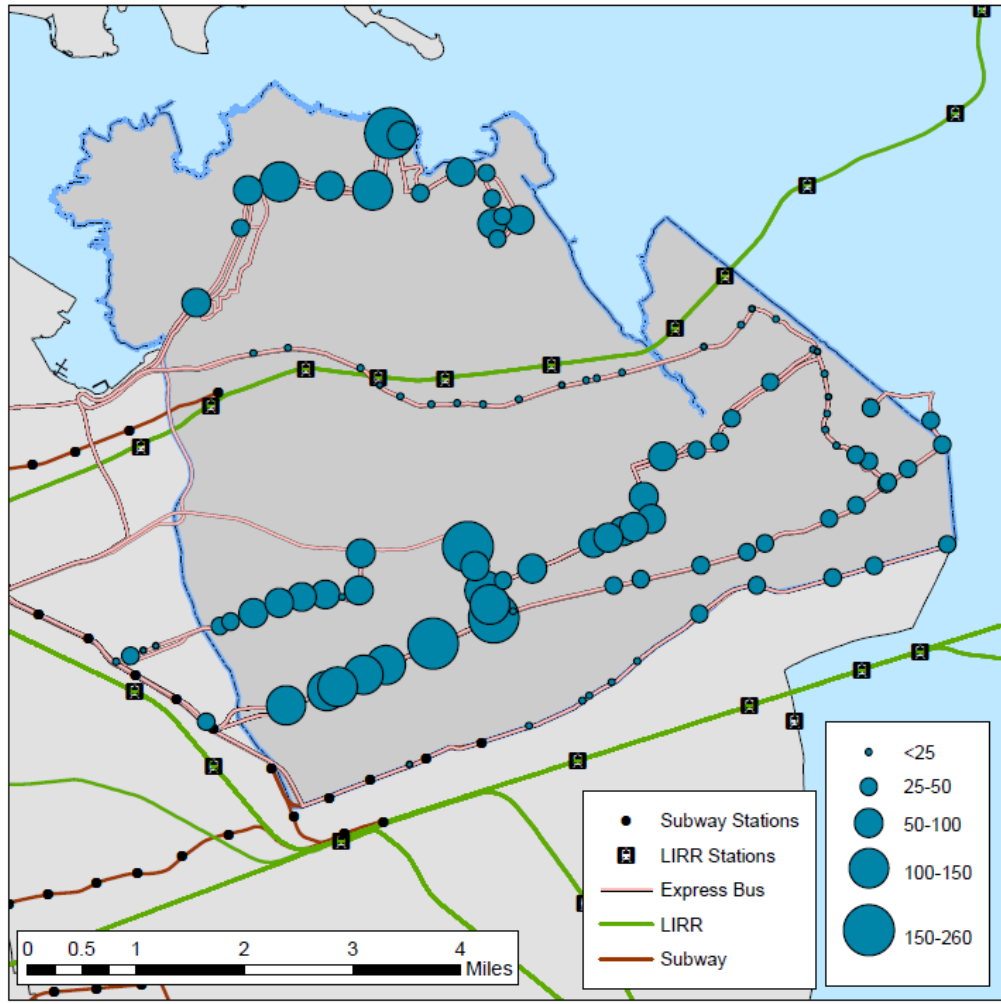
Figure 16. Major Bus Stops (>3,000 boardings and alighting per day)



Express Bus Boardings

Express bus ridership (by boardings) is concentrated along Union Turnpike, 188th Street, 73rd Avenue, Jewel Avenue in the southern section of Northeast Queens, and in Beechhurst, Bay Terrace, and Whitestone neighborhoods in the northern section of the study area. Lower ridership (by boardings) is seen on corridors that are adjacent to the subway and Long Island Rail Road. Only boarding location data is included because of the Manhattan-bound orientation of express bus service. Northeast Queens residents board express buses going to Manhattan, but passengers do not exit the bus until they reach Manhattan. Exceptions to this rule are allowed for special transfer locations such as Union Turnpike for transfers among the midtown QM1, QM5, and QM6 and the downtown QM7 and QM8 buses, or between the 3rd Avenue and 6th Avenue variations of these midtown buses.

Figure 17. Express Bus Boardings in Northeast Queens



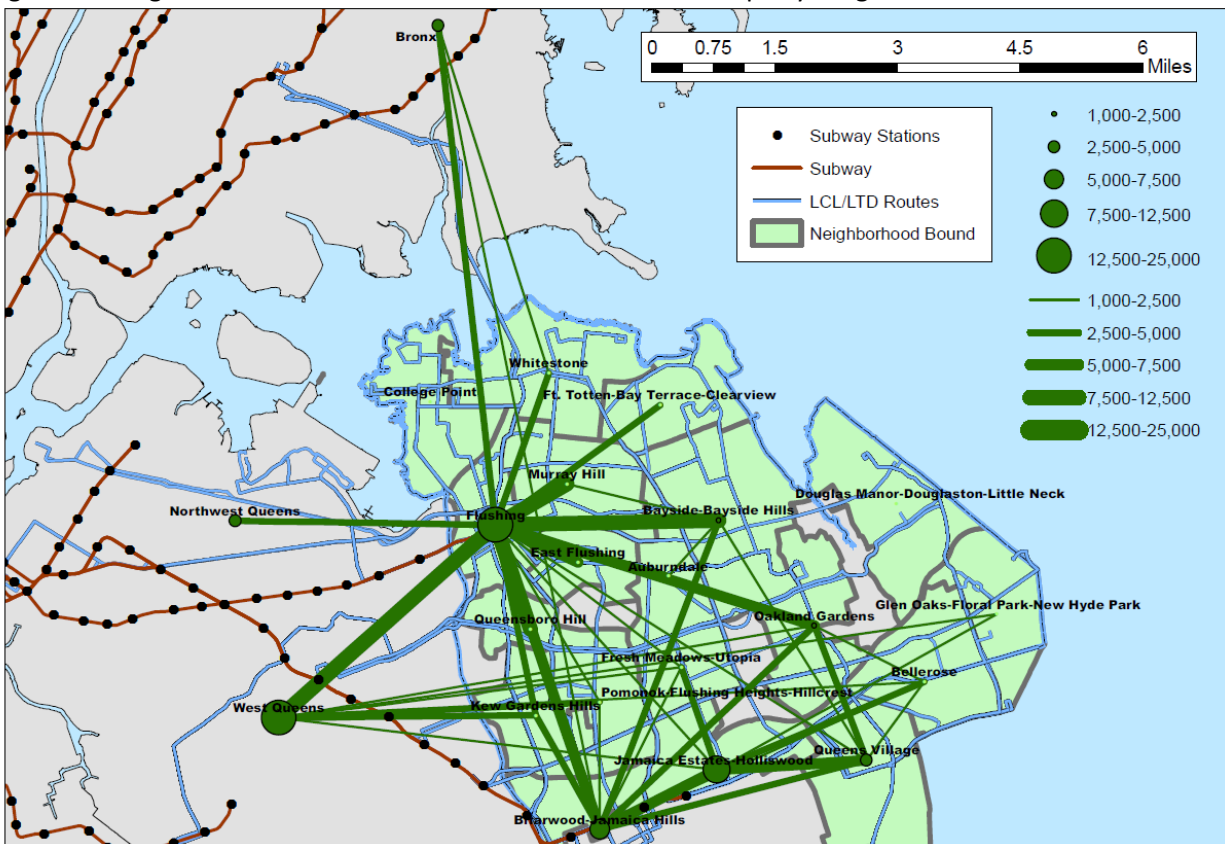
*QM20 data was not available for this map

Origins and Destinations

The data that have become available since the implementation of Bus Time have allowed the MTA to estimate the origins and destinations of bus passengers by capturing MetroCard swipe location details throughout the day. The data presented here represent the daily ridership for an average mid-week weekday (Tuesday/Wednesday/Thursday) – or an average Saturday – from the period covering mid-September to mid-October 2013. The origin-destination analysis can help to identify where Northeast Queens bus customers are traveling along a particular route. These data can also show which bus routes are being used in areas with multiple buses.

Figure 18 shows the origins and destinations of bus customers through the visualization of the major inter- and intra-neighborhood movements of Northeast Queens bus passengers. Neighborhood names and boundaries are consistent with the neighborhoods defined as “Neighborhood Tabulation Areas” by the Department of City Planning. Single bus trips (not complete path of a bus-to-bus transfer) are shown as movements to and from Northeast Queens neighborhoods. Any neighborhood links that had greater than 1,000 daily weekday passengers are presented on the map, with the line thickness indicating the importance of serving those two destinations.

Figure 18. Origins and Destinations of Northeast Queens Bus Trips by Neighborhood



The underlying data that produced this visualization can be found in a standard Origin-Destination matrix located in Appendix C: Additional Data.

Trip Length (NYC Transit Authority Routes Only)

Bus trips on Northeast Queens routes exhibit slightly longer trips than those in the rest of Queens. Weekday trips are 9.9% longer than trips made in other parts of Queens. The two sets of Queens routes were compared with a t-test, and the average trip lengths are meaningfully different to a confidence interval greater than 90%.

Table 17. Weekday Average Trip Comparisons

Set Of Routes	Weekday Average Trip Length (Miles)
Queens Routes	2.81
Northeast Queens Routes	2.90
Non-NE Queens Routes	2.64

Within the set of Northeast Queens NYCT bus routes there is a considerable amount of variance in the average trip length. The longest average trips are seen on the Q27 Limited, where trips are almost 5 miles long. The average trip length for Q1 customers is 4.1 miles and 3.71 miles for Q46 Limited customers, the second and third longest trips among bus routes in the study area. The Q20B and Q26 customers have the shortest average trip lengths on weekdays at 1.55 miles and 1.79 miles, respectively. These two routes are the only bus routes in Northeast Queens that have average trips less than two miles. The full table of weekday average trip length for Northeast Queens NYCT bus routes is located in Appendix C: Additional Data of this report.

Transfers

Bus-to-Subway Transfers by Route

Of the 29 local bus routes in Northeast Queens, nine are specifically designated as subway “feeder” routes, where more than half of customers on these routes are primarily interested in getting to a subway for the remainder of their journey. The remaining routes, called “grid” routes, see fluctuating ridership along the route with customers boarding and alighting throughout the entire length of the route, but also serve subway stations as well. It is unsurprising that a significant number of bus trips are followed by a swipe into a subway station. On an average weekday in May, 58,300 bus customers transferred from Northeast Queens routes to a subway. Assuming that customers make round trips doubles this number, over a third (39.0%) of bus trips are also associated with a subway journey. The following table presents routes in Northeast Queens by the amount of passengers they deliver to subway stations for an additional journey. It also compares the number of transfers to total ridership. It is evident from this fraction that for some routes within Northeast Queens the most important function is feeding to the subway. For determining the number of bus trips that are associated with a subway trip, it was assumed that every bus-to-subway transfer generates a symmetrical subway-to-bus transfer as well.

Table 18. Bus-to-Subway Weekday Transfers by Bus Route (May 2014)

Route	Bus-To-Subway Transfers	Weekday Ridership	Portion of Trips Subway Transfer
Q26	586	1,492	79%
Q64	3,982	10,943	73%
Q16	1,221	4,144	59%
Q46	5,963	23,507	51%
Q36	1,505	6,376	47%

Q15	1,368	5,936	46%
Q1	1,064	5,065	42%
Q28	2,213	10,696	41%
Q12	2,233	11,052	40%
Q43	3,176	16,997	37%
Q65	3,941	22,387	35%
Q58	5,290	31,434	34%
Q13	1,465	8,652	34%
Q50	865	5,071	34%
Q44	4,590	30,133	30%
Q66	2,337	15,841	30%
Q25/Q34	4,103	28,282	29%
Q17	2,658	18,850	28%
Q20A	2,076	14,691	28%
Q27	3,737	27,398	27%
Q30	1,502	11,214	27%
Q19	451	3,587	25%
Q48	316	2,908	22%
Q88	850	12,162	14%
Q31	446	6,432	14%
Q76	378	6,324	12%

Downtown Flushing is the main transportation hub in Northeast Queens and by far the most important bus-to-subway transfer point accounting for just under half of the total bus-to-subway transfers. It is also the largest intermodal transit hub in New York City.

Bus-to-Subway Transfers by Subway Station

On an average weekday, almost 27,000 customers transfer between Northeast Queens bus routes and the **7** Flushing-Main St station. The Q46 has the largest single transfer from one route to a subway with 5,965 transfers to the **E F** Kew Gardens-Union Tpke on an average weekday. The **F** Jamaica-179 St station is the third busiest bus-to-subway transfer point in Northeast Queens and is served by NICE buses in addition to MTA services.

Several other stations have considerable ridership from Northeast Queens bus routes. Table 19 shows the nine subway stations that have an excess of 1,000 riders per day using the station after riding a bus. Note that return journeys (i.e., subway-to-bus transfers) are not included in this table, but could be considered approximately equal in magnitude to the bus-to-subway transfers. Full transfer data can be found in the appendix.

Table 19. Bus-to-Subway Weekday Transfers by Station (May 2014)

Subway Station	Northeast Queens Bus Routes Serving Subway Station	# Of Transfers
Flushing-Main St (7)	Q12, Q13, Q15, Q15A, Q16, Q17, Q19, Q20A/B, Q25, Q26, Q27, Q28, Q34, Q44, Q48, Q50, Q58, Q65, Q66	26,919
Kew Gardens-Union Turnpike (E F)	Q46	5,965
Jamaica-179 St (F)	Q1, Q17, Q36, Q43, Q76	5,948
Forest Hills-71 Av (E F M R)	Q64	3,992
Grand Av-Newtown (M R)	Q58	3,722
Jamaica Center-Parsons-Archer (E J Z)	Q20A/B, Q25, Q30, Q31, Q34, Q44	1,670
169 St (F)	Q1, Q17, Q30, Q31, Q36, Q43	1,387
Sutphin Blvd-Archer Av-JFK Airport (E J Z)	Q25, Q30, Q31, Q34, Q43	1,277
Northern Blvd (M R)	Q66	1,220

Figure 19. Detailed Bus-to-Subway Transfers for Busiest Stations

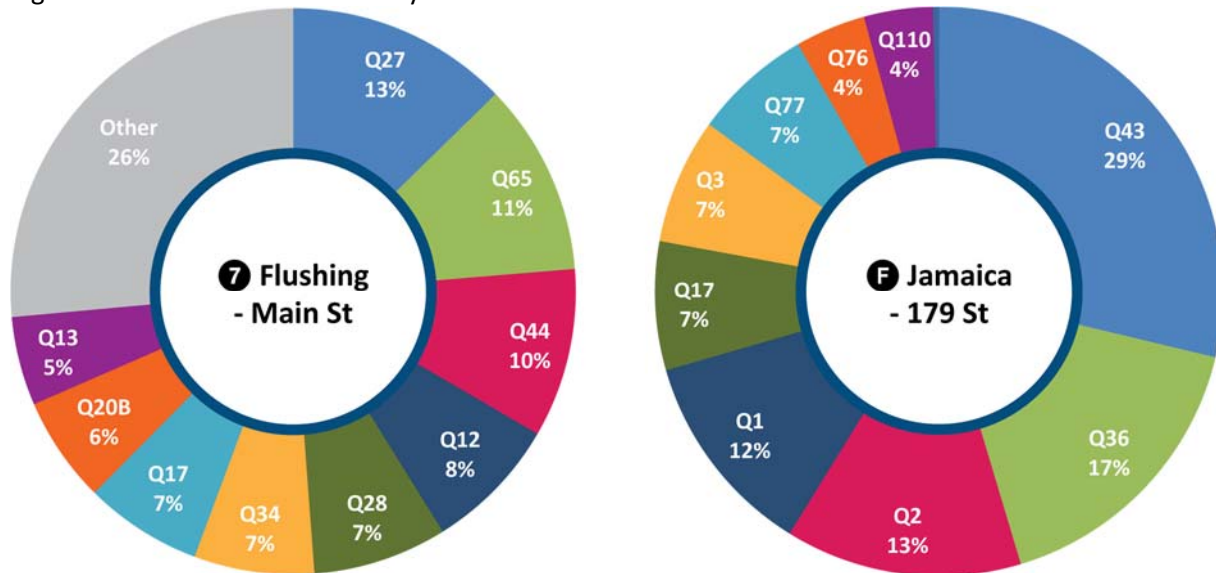
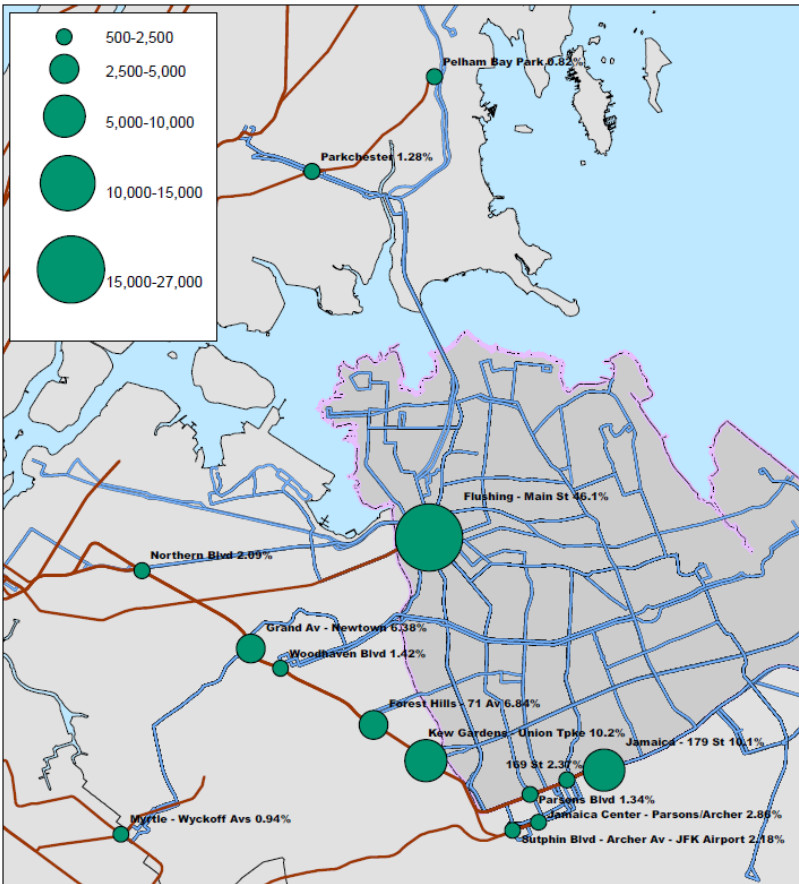


Figure 20. Bus-to-Subway Weekday Transfers for Northeast Queens Bus Routes (>500 transfers)



Bus-to-Bus Transfers

The 29 local bus routes in Northeast Queens give rise to the possibility of numerous bus-to-bus transfer opportunities. Most bus-to-bus transfers are from a local or limited bus to another local or limited bus. There are relatively few transfers from a local or limited bus to an express bus, or vice versa.

The most significant bus-to-bus transfers are presented in Figure 21 and Table 20. The two largest single bus-to-bus transfers occur between the Q46 and Q27 at Union Turnpike and Springfield Boulevard and between the Q27 and Q43 at Hillside Avenue and Springfield Boulevard. In addition to these locations, a significant number of combined bus transfers occur in Downtown Flushing near Main Street, Kissena Boulevard, and Roosevelt Avenue. A fuller representation of bus-to-bus transfers is included in Appendix C: Additional Data of this report.

Figure 21. Bus-to-Bus Weekday Transfers in Northeast Queens (>400 transfers)

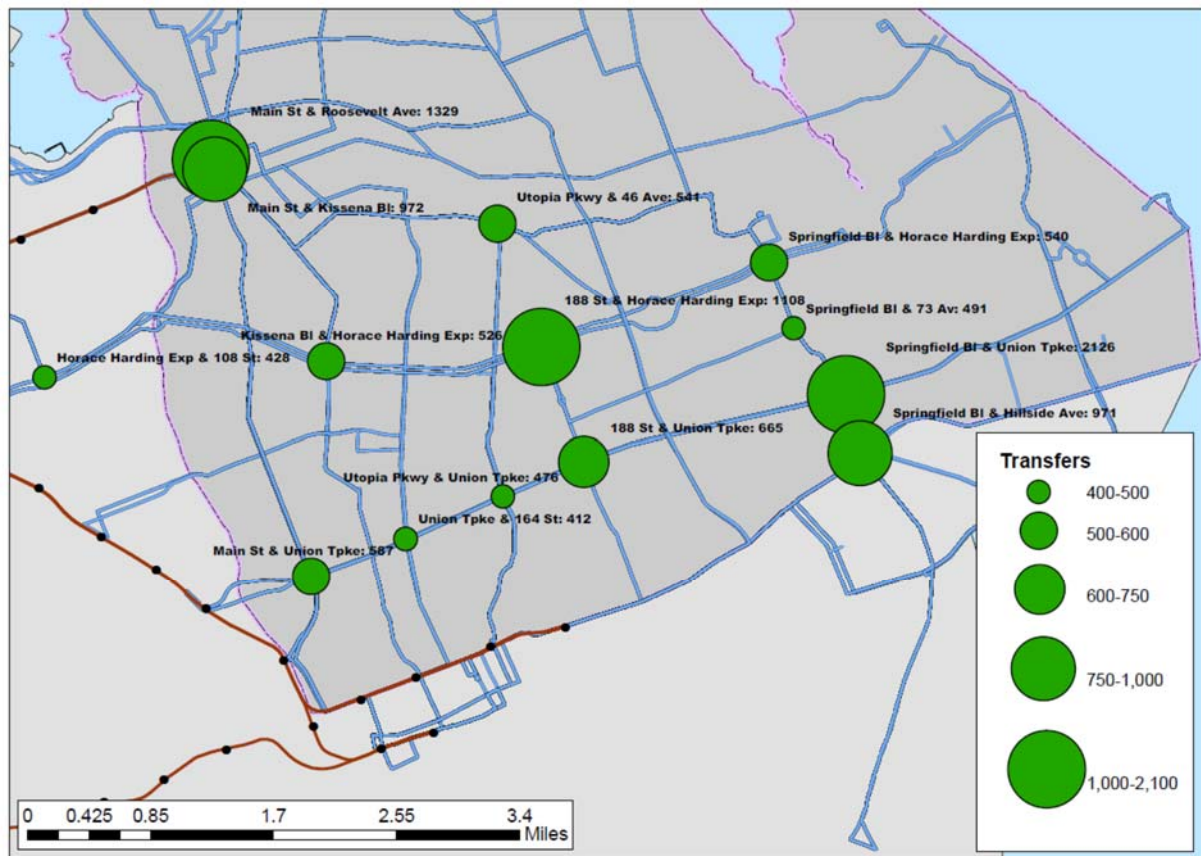


Table 20. Highest Bus-to-Bus Transfers in Northeast Queens

From/To Bus Route	To/From Bus Route	Location		Average Weekday Transfers
Q46	Q27	Springfield Bl	Union Tpke	1709
Q44	Q20A/B	*	*	1081
Q27	Q43	Springfield Bl	Hillside Ave	971
Q17	Q46	188 St	Union Tpke	665
Q44	Q46	Main St	Union Tpke	587
Q17	Q30	188 St	Horace Harding Exp	557
Q17	Q88	188 St	Horace Harding Exp	551
Q31	Q27	Utopia Pkwy	46 Ave	541
Q30	Q27	Springfield Bl	Horace Harding Exp	540
Q88	Q30	Kissena Bl	Horace Harding Exp	526
Q58	Q27	Main St	Kissena Bl	494
Q27	Q88	Springfield Bl	73 Av	491
Q58	Q44	Main St	Kissena Bl	478
Q30	Q46	Utopia Pkwy	Union Tpke	476
Q17	Q65	Main St	Roosevelt Ave	472
Q44	Q27	Main St	Roosevelt Ave	430
Q58	Q88	Horace Harding Exp	108 St	428
Q66	Q44	Main St	Roosevelt Ave	427
Q46	Q88	Springfield Bl	Union Tpke	417
Q46	Q65	Union Tpke	164 St	412

*the Q44 and Q20A/B run along the same path for most of their routes in Queens

Multiple Transfers

Customers that have two or more transfers are considered multiple transfer customers. This is often referred to as a three-legged transfer. The three routes involved in largest number of three-legged transfers are the Q46, Q27, and the Q43. The chart below shows all three-legged trips in the study area with more than 25 customers per weekday.

Table 21. Three-Legged Transfers in Northeast Queens (>25 trips)

1st Leg	2nd Leg	3rd Leg	Number Of Three-Leg Trips
Q27	Q43	Jamaica-179 St (F)	64
Q46	Q27	Q77	41
Q27	Q46	Kew Gardens-Union Turnpike (E, F)	30
Q4	Q27	Q46	28
Q46	Q27	Q4	28
Q88	Q43	Jamaica-179 St (F)	27
Q83	Q27	Q46	26
Q46	Q27	Q83	25
Q31	Q27	Q43	25

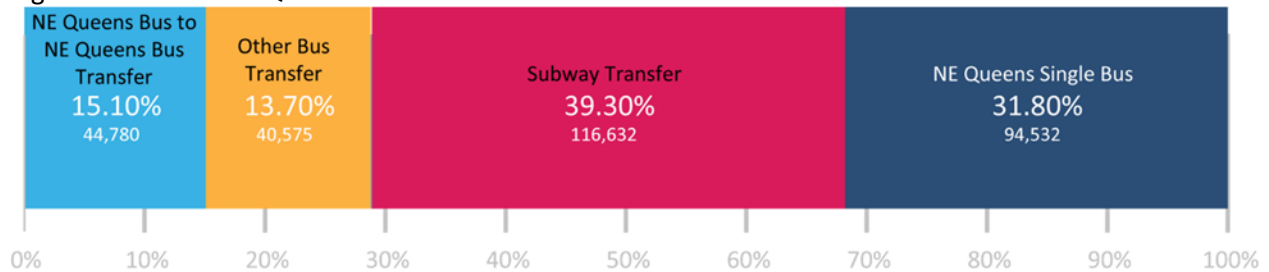
Classifying Northeast Queens Bus Transfers

After evaluating all transfer counts the nature of trips made within Northeast Queens can be inferred. Bus riders were broken down as transfers to Subway, transfers to other Northeast Queens buses, transfers to other buses, or single-leg journey. Customers are generally split as: 30% single-leg journey, 30% bus-to-bus transfer, 40% bus-to-subway transfer.

Table 22. Northeast Queens Mode Transfers

Bus Customer Type	Total Weekday Ridership	Percentage Of Customers
Total Local or Limited Bus-to-Bus Transfers	85,629	28.9%
Transfers to Northeast Queens Routes	44,780	15.1%
Transfers to other Local or Limited Bus Routes	40,575	13.7%
Transfer to Express Bus	274	0.1%
Total Bus-Subway & Subway-Bus Transfers - Inferred	116,632	39.3%
Total Single Bus Trip Journeys - Inferred	94,532	31.8%
Northeast Queens Unique Trips - Inferred	297,000	100%

Figure 22. Northeast Queens Mode Transfers



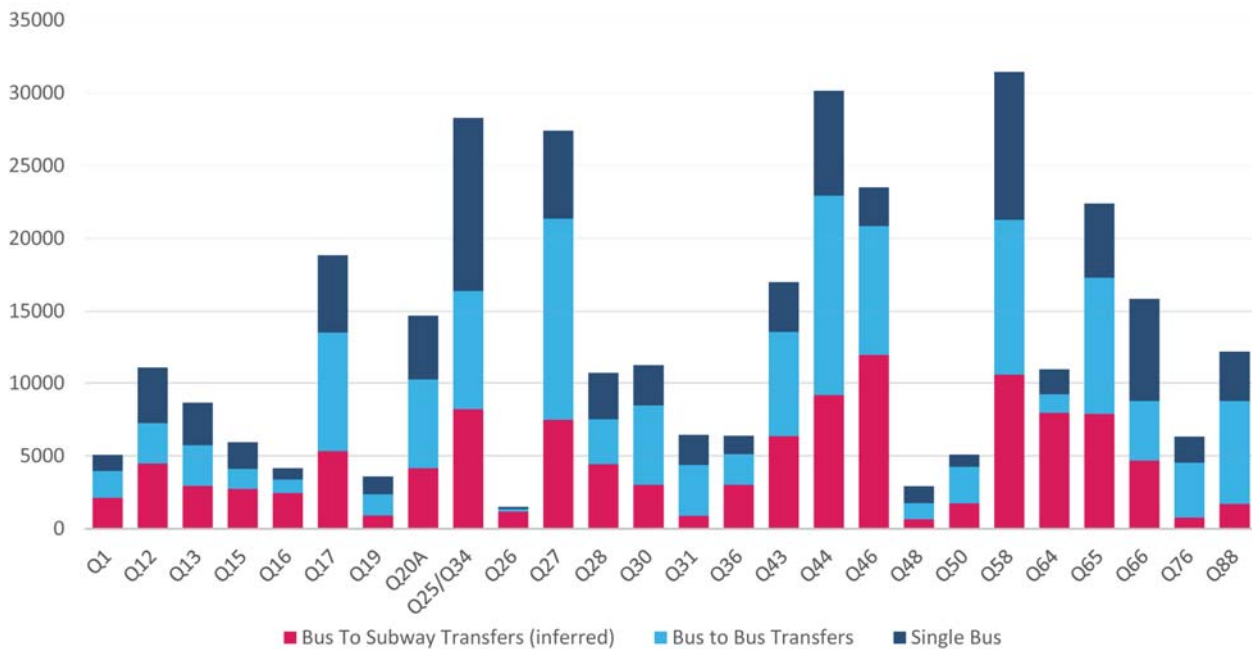
Among Northeast Queens bus routes, there are routes that clearly serve as subway feeders, where more than half of customers on these routes were connecting to subways. Routes with the highest percentage of subway transfers are the Q26 (79%), Q64 (73%), Q16 (59%), and Q46 (51%). The route with the highest number of bus transfers is the Q76, with 60% of customers transferring to other buses. Other bus routes with more than half of weekday customers transferring to and from other buses are the Q88 (58%), Q31 (54%), Q27 (51%), and Q50 (50%). The routes with the largest percentage of bus customers remaining on a single bus are the Q66 (45%), Q25/Q34 (42%), and the Q48 (40%).

Table 23. Northeast Queens Transfers by Bus Route

Route	Bus-To-Subway Transfers	% Subway Transfer	Bus-To-Bus Transfers	% Bus Transfer	Single Bus	% Single Bus	Average Weekday Ridership
Q1	2,128	42%	1837	36%	1,100	22%	5,065
Q12	4,466	40%	2784	25%	3,802	34%	11,052
Q13	2,930	34%	2802	32%	2,920	34%	8,652
Q15	2,736	46%	1371	23%	1,829	31%	5,936
Q16	2,442	59%	934	23%	768	19%	4,144
Q17	5,316	28%	8160	43%	5,374	29%	18,850
Q19	902	25%	1459	41%	1,226	34%	3,587

Q20A	4,152	28%	6101	42%	4,438	30%	14,691
Q25/Q34	8,206	29%	8180	29%	11,896	42%	28,282
Q26	1,172	79%	186	12%	134	9%	1,492
Q27	7,474	27%	13892	51%	6,032	22%	27,398
Q28	4,426	41%	3077	29%	3,193	30%	10,696
Q30	3,004	27%	5467	49%	2,743	24%	11,214
Q31	892	14%	3485	54%	2,055	32%	6,432
Q36	3,010	47%	2107	33%	1,259	20%	6,376
Q43	6,352	37%	7170	42%	3,475	20%	16,997
Q44	9,180	30%	13759	46%	7,194	24%	30,133
Q46	11,926	51%	8925	38%	2,656	11%	23,507
Q48	632	22%	1117	38%	1,159	40%	2,908
Q50	1,730	34%	2513	50%	828	16%	5,071
Q58	10,580	34%	10695	34%	10,159	32%	31,434
Q64	7,964	73%	1274	12%	1,705	16%	10,943
Q65	7,882	35%	9415	42%	5,090	23%	22,387
Q66	4,674	30%	4095	26%	7,072	45%	15,841
Q76	756	12%	3783	60%	1,785	28%	6,324
Q88	1,700	14%	7067	58%	3,395	28%	12,162

Figure 23. Northeast Queens Transfers by Bus Route



4. QUALITY OF SERVICE

This section examines three areas that affect the quality of service for bus customers: **performance, comfort + environment, and customer communication**. If a bus is not performing well, it may indicate that existing service is inadequate. Performance is measured against scheduled times at timepoints and intervals between consecutive buses. Detailed performance data are available in Queens since March 2014 based on Bus Time, which provides AVL data in 30-second intervals. The bus location data are compared to the schedule to assess performance. AVL data also provides running time and reliability data. Bus speed information is provided by Intelligent Vehicle Network (IVN) data.

The comfort of customers and the environment while waiting for the bus and while on the bus are important indicators of the quality of service and important parts of customer experience. Three factors that affect comfort are the passenger environment, overcrowding, and bus stop furniture. Passenger environment surveys assess the on-board conditions encountered by customers in terms of cleanliness, litter, and climate control. Overcrowding is measured using loading guidelines. The availability of customer amenities at bus stops, including shelters, seating, and signage is assessed based on inventories of bus stop facilities.

The final measure of the quality of bus service in Northeast Queens is the availability of customer information and communication. Customer information is available through Guide-a-Ride canisters at bus stops and on Bus Time.

PERFORMANCE

Wait Assessment

Wait Assessment (WA) is the primary measure used to assess the timeliness of bus service. It measures actual headway between successive buses at time points compared to scheduled headways. This measures regularity of service to ensure riders have acceptable waits between successive buses. An observed headway interval is considered to be “passing” if it is within the scheduled headway +3 minutes during the peak, or the scheduled headway +5 minutes off-peak.

Table 24 shows a summary of Wait Assessment for spring 2014. It compares Weekday, Saturday, and Sunday service of those routes which serve Northeast Queens, to all Queens routes and all NYC routes. The table shows that WA performance in Northeast Queens is better than that of the rest of the borough and city. On average, routes serving Northeast Queens have 2-3% better performance than the combined borough average, and 3-5% better performance than the city average. Route specific information for each route is provided in Appendix C.

Not all routes outperform their peers, though on a route-by-route basis, a strong majority of routes serving Northeast Queens are individually better than the system and borough average. This is especially true on weekdays when almost 90% of routes serving Northeast Queens have wait assessment performance surpassing Queens and city averages.

Table 24. Wait Assessment

Route	Weekday	Saturday	Sunday
5 Borough Average	79.2%	80.2%	81.4%
Queens Average	79.4%	81.4%	83.9%
Ne Queens Average	82.7%	83.5%	85.9%
# Beating Queens Avg.	22/25	11/21	10/21
# Beating City Avg.	23/25	13/21	15/21
% Beating Queens Avg.	88%	52%	48%
% Beating City Avg.	92%	62%	71%

On-Time Performance

On-Time Performance (OTP) for buses is defined as being between 1 minute early and 5 minutes late to en-route timepoints. An analysis of OTP was conducted, and shows similar results to that of Wait Assessment. Northeast Queens consistently outperforms total borough and city averages overall and on an individual route basis.

Table 25. On-Time Performance

Route	Weekday	Saturday	Sunday
5 Borough Average	65.9%	60.2%	64.0%
Queens Average	67.8%	63.3%	67.5%
Ne Queens Average	69.2%	66.1%	70.2%
# Beating Queens Avg.	20/25	12/21	13/21
# Beating City Avg.	21/25	16/21	18/21
% Beating Queens Avg.	80%	57%	62%
% Beating City Avg.	84%	76%	86%

While most Northeast Queens routes outperform those in the system, a few routes are under-performing. The Q25 is in the bottom tier of performance for both weekday and weekend service. The Q17 and Q34 are the routes delivering the lowest performing weekday service. The Q44 delivers the lowest weekend performance. See Section 6: Recommendations for a discussion on next steps that the agencies will undertake to improve bus performance.

Peak Period Travel Performance

Within Northeast Queens, bus routes maintain better performance than citywide and Queens averages. A strong majority (minimum of three-quarters) of Northeast Queens routes have better performance than their city and borough peers.

Table 26. Peak Period Travel Performance

	Weekday AM (6-9)			Weekday PM (4-7)		
	On-Time Performance	Wait Assessment	Not In Service*	On-Time Performance	Wait Assessment	Not in Service*
5 Borough Average	70.5%	78.8%	2.4%	59.6%	72.9%	3.0%
Queens Average	70.1%	77.4%	4.1%	60.9%	72.6%	4.3%
Northeast Queens Average	74.9%	81.2%	2.5%	66.5%	76.4%	2.6%

# Beating Queens Avg.	25	25	28	23	24	27
# Beating City Avg.	25	22	10	24	24	9
% Beating Queens Avg.	86%	86%	97%	79%	83%	93%
% Beating City Avg.	86%	76%	34%	83%	83%	31%

*“Not in Service” buses are not included in any performance measures used by MTA. Buses may be “Not in Service” due to mechanical problems or when the bus has finished its last trip for the day and is returning to its depot.

Table 27. Peak Period Travel Performance by Route

Route	Weekday AM (6-9)			Weekday PM (4-7)		
	On-Time Performance	Wait Assessment	Not In Service*	On-Time Performance	Wait Assessment	Not In Service*
Q1	75.9%	80.0%	2.8%	71.4%	84.9%	1.3%
Q12	83.9%	87.6%	1.3%	67.5%	74.6%	2.8%
Q13	87.7%	90.2%	0.8%	64.1%	74.4%	3.4%
Q15	89.7%	91.4%	0.3%	72.7%	78.0%	1.5%
Q15a	91.6%	91.2%	0.4%	76.8%	81.0%	2.5%
Q16	84.4%	85.6%	1.1%	71.6%	77.5%	1.1%
Q17	70.7%	76.8%	3.6%	49.5%	67.7%	4.4%
Q19	80.6%	85.8%	0.9%	51.5%	65.3%	3.0%
Q20a	81.8%	85.0%	0.7%	71.8%	79.6%	1.4%
Q20b	82.5%	86.0%	1.2%	75.0%	84.7%	1.1%
Q25	42.4%	68.8%	2.6%	49.5%	71.2%	3.0%
Q26	85.3%	85.6%	1.2%	85.1%	86.1%	0.9%
Q27	79.0%	82.1%	3.6%	72.3%	78.2%	2.6%
Q28	85.4%	89.6%	1.5%	76.3%	82.2%	2.0%
Q30	72.8%	78.3%	2.4%	65.4%	73.3%	4.0%
Q31	79.8%	82.2%	2.2%	69.2%	76.8%	1.9%
Q34	65.0%	77.1%	1.9%	61.2%	77.4%	1.3%
Q36	83.7%	84.4%	2.3%	77.9%	80.5%	1.4%
Q43	79.8%	80.4%	3.9%	73.9%	79.2%	2.8%
Q44	71.9%	78.9%	3.1%	69.2%	79.0%	2.3%
Q46	76.9%	78.3%	3.6%	72.4%	78.2%	3.3%
Q48	77.8%	87.9%	0.6%	64.0%	75.1%	1.3%
Q50	73.5%	83.0%	1.3%	69.3%	79.2%	1.3%
Q58	61.6%	82.2%	0.7%	58.7%	77.3%	1.6%
Q64	70.6%	77.8%	2.8%	57.7%	73.1%	6.1%
Q65	77.0%	81.9%	1.7%	76.4%	79.6%	1.5%
Q66	80.9%	84.0%	1.7%	60.8%	70.6%	3.2%
Q76	81.0%	82.3%	2.2%	67.5%	73.4%	3.4%
Q88	69.8%	74.9%	5.3%	64.9%	72.0%	3.8%

Express Bus Performance

The weekday performance of express buses was also evaluated through on-time performance and wait assessment metrics. Northeast Queens express routes exhibit performance that is similar to the rest of the borough of Queens. These measures fall below the citywide performance average. Within the set of express buses serving Northeast Queens, the QM7 and QM8 exhibit on-time performance that is ten percent better than other routes. Both of these routes travel to Queens without traversing the Queensboro Bridge, where congestion slows down the other buses.

Table 28. Express Bus Weekday Performance

Route	On-Time Performance	Wait Assessment
5 Borough Average	64.5%	78.9%
Queens Average	60.4%	77.0%
Northeast Queens Average	60.0%	76.2%
QM1	61%	81%
QM2	61%	78%
QM3	53%	60%
QM4	61%	74%
QM5	53%	73%
QM6	57%	74%
QM7	75%	80%
QM8	72%	81%
QM20	63%	77%
X68	55%	77%

The QM7 and QM8 exhibit higher overall OTP due to symmetric performance in both directions. When reviewing performance by direction a clear trend emerges, with eastbound performance overshadowing the OTP results. With the exception of the QM7 and QM8, eastbound OTP does not exceed about 50% for weekday express bus service.

Table 29. Express Bus Weekday Performance by Route by Direction

Direction	Eastbound		Westbound		Total	
	On-Time Performance	Wait Assessment	On-Time Performance	Wait Assessment	On-Time Performance	Wait Assessment
Route						
QM1	16%	74%	70%	84%	51%	80%
QM2	46%	77%	68%	78%	58%	78%
QM20	32%	41%	76%	92%	49%	60%
QM3	25%	57%	69%	82%	54%	73%
QM4	33%	70%	57%	75%	49%	73%
QM5	28%	65%	63%	78%	53%	74%
QM6	74%	80%	75%	80%	74%	80%
QM7	73%	83%	70%	74%	73%	81%
QM8	35%	71%	70%	80%	59%	77%
X68	51%	76%	57%	77%	54%	77%

Saturday and Sunday have fewer express bus routes offering service than weekdays. Weekend performance is better than weekday performance, and on weekends Northeast Queens performance is better than citywide and Queens averages.

Table 30. Express Bus Weekend Performance

Route	SATURDAY		SUNDAY	
	OTP	WA	OTP	WA
5 Borough Average	61.1%	83.2%	69.8%	86.2%
Queens Average	59.6%	83.4%	72.5%	90.0%
Northeast Queens Average	64.7%	85.6%	72.5%	90.0%
QM2	63%	91%	75%	89%
QM4	76%	89%	84%	92%
QM5	59%	83%	70%	89%
QM6	66%	84%	65%	90%

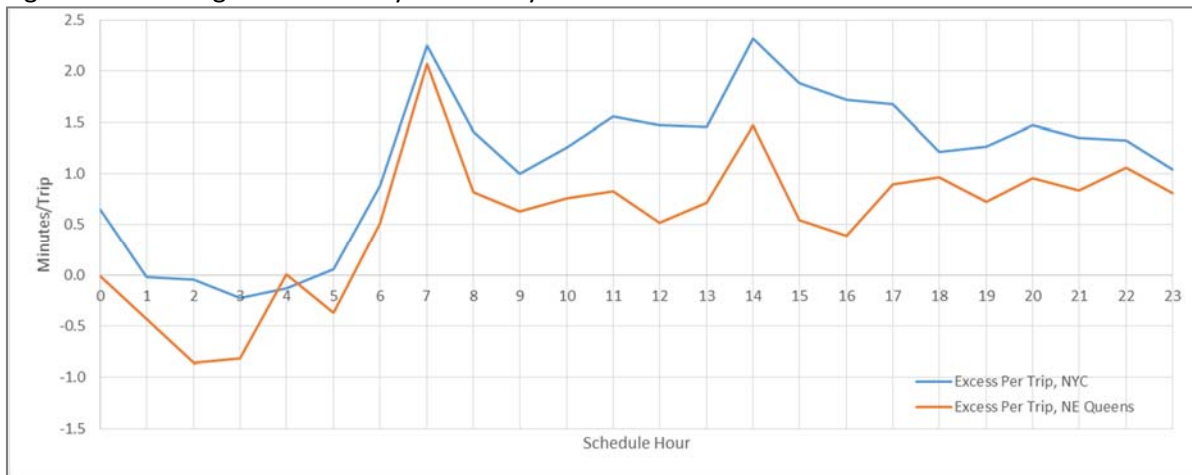
Running Time

The allocation of scheduled running time for each route can have performance implications if an insufficient amount of time is specified within the schedule. The utilization of Bus Time in the borough since March 2014 allows for more frequent updates to scheduled running times, as well as utilizing more current data and a greater quantity of data to more accurately determine travel time averages. Different times of day have different expected travel times through the road network, and therefore running times are specified for each route by direction, within half-hour segments. Directional half-hour segments are the smallest level at which running time changes can be made.

To investigate the appropriateness of running times in Northeast Queens the total running times of buses were compared to their schedules. An ideal situation is one in which running times match those scheduled. An analysis of the Northeast Queens routes from spring 2014 shows that disparities exist between different times of day, with certain times seeing more excess running time per trip. This indicates that more running time should be allocated in the schedule. On average, every bus trip exceeded the scheduled running time by only 47 seconds, though natural variation in travel times means some trips were slower while others were faster.

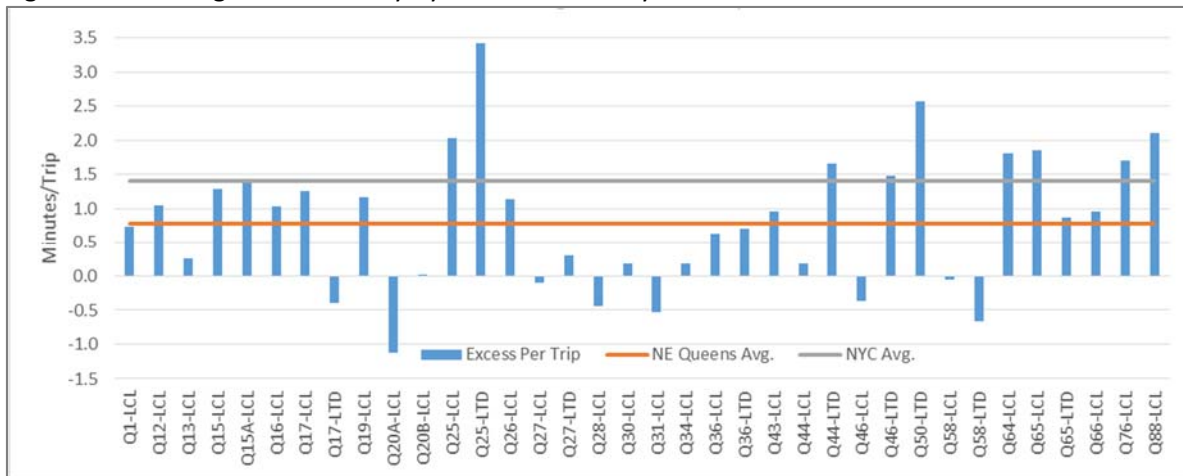
Compared to citywide data, Northeast Queens has actual running times that more closely reflect the scheduled running times. This finding is consistent with the OTP and WA results discussed previously.

Figure 24. Running Time Accuracy - Weekdays



A route-level analysis of running time was conducted and it was found that disparities between routes exist. A priority for revising schedules to improve service performance and reliability may be to investigate in detail the routes with the least accurate allocation of running time in the particularly troublesome times of day. Some of the routes (e.g., Q25) that emerge as having actual running times greatly in excess of scheduled running times were those that also have notable on-time performance issues.

Figure 25. Running Time Accuracy by Route - Weekdays



All buses have now been equipped with Bus Time for over a year, and improvement of allocated running times will be incorporated into future updates to schedules.

Express Bus Running Time

A review of the Bus Time data for express buses indicates that there is too little running time scheduled for a majority of time periods. Within Northeast Queens 55% of weekday scheduled running time periods have scheduled running times that are less than the 15th percentile of actual running time. The QM7, QM8, and X68 have notably more realistic running times than other express routes. The improved availability of

running time data through Bus Time will improve the allocation of scheduled running times to routes and should result in performance improvement.

Table 31. Express Bus Running Time to Central Business Districts (CBDs)

Route	Trip Segment	Average Run Time	Median Run Time	Average Schedule Run Time	Travel Time Gap	% Travel Time Gap
QM1	Union Tpk-Main St -> 6 Av-W 37 St	38.2	37.8	33.0	5.2	16%
QM2	Bell Bl-23 Av -> 6 Av-W 37 St	64.5	62.6	53.5	11.0	21%
QM3	Little Neck Py-Horace Harding Exp -> 6 Av-W 36 St	64.6	61.4	61.4	3.2	5%
QM4	164 St-Horace Harding Exp -> 6 Av-W 36 St	52.2	51.9	44.6	7.6	17%
QM5	260 St-Union Tp -> 3 Av-E 38 St	72.2	71.6	64.8	7.4	11%
QM5	260 St-Union Tp -> 6 Av-W 37 St	78.5	78.4	67.5	11.0	16%
QM6	North Shore Towers-Bldg Ent-> 6 Av-W 37 St	71.1	71.5	63.6	7.5	12%
QM7	188 St-64 Av -> Pearl St-Frankfort St	56.2	55.1	53.3	2.9	5%
QM8	260 St-Union Tp -> Pearl St-Frankfort St	76.8	75.5	73.9	2.9	4%
QM20	Willets Pt Bl-Francis Lewis Bl -> 6 Av-W 35 St	49.6	49.2	50.3	-0.7	-1%
X68	Hillside Av-268 St -> E 37 St-3 Av	60.3	59.6	58.2	2.1	4%

Table 32. Express Bus Running Time Shortfalls

Route	Instances Of Time-Period Running Times Too Short	Number Of Time-Period Instances In Data Set	% Of Time-Periods With Running Times Too Short
QM1	22	38	58%
QM2	38	60	63%
QM3	2	6	33%
QM4	25	41	61%
QM5	44	63	70%
QM6	27	47	57%
QM7	0	17	0%
QM8	2	14	14%
QM20	24	41	59%
X68	3	16	19%
Express Total	187	343	55%

Road Reliability

Road reliability is defined by the percentage of scheduled trips (observed at timepoints) that are in service and available to pick up customers. Occasionally, scheduled pickups cannot be made due to one of several reasons: the bus is full or otherwise unable to pick up passengers (headsign displays “Not In Service” or “Next Bus Please”), the bus was taken out of service due to a mechanical or equipment issue, or the scheduled bus was not available to pull out of the depot. Road reliability for Northeast Queens routes exhibits behavior almost identical to system-wide performance. Almost 98% of all scheduled bus trips were made in Northeast Queens for all days of the week. Queens road reliability is lower than the New York City average, meaning that Northeast Queens has better performance than the borough overall as

measured by this metric. Approximately 1 out of every 50 scheduled trips in Northeast Queens either have a “Not in Service” bus pass by the scheduled timepoints, or simply have no bus show up at all. Table 33 shows the portion of scheduled trips at timepoints that were not in service when expected.

Table 33. Road Reliability

Route	Weekday	Saturday	Sunday
5 Borough Average	2.3%	1.9%	1.9%
Queens Average	3.4%	3.3%	2.2%
NE Queens Average	2.2%	2.0%	1.9%

Bus Speeds

Bus Speeds can be determined from a bus hardware data source, IVN data. IVN data provide a stream of information from equipped buses, including GPS and timestamps, as well as information on the state of the bus (e.g., speed, door status). Time intervals are irregular, but typically quite fine-grained (e.g., 1 second). Unlike Bus Time, only one-third of the bus fleet is equipped with IVN capabilities (model year 2008 and newer). The assignment of buses by depot to different routes means that data availability is not uniform for all routes. For this reason, IVN data are not presented unless a significant number of records for a day and route combination were available to provide meaningful conclusions. Furthermore, the ability to process and store these data was not available until May 2014.

For mid-May to mid-June 2014, Northeast Queens average bus speeds were compared with other routes. Average speeds exceeded those of Queens for every time of day including morning and evening peak periods. Queens bus speeds exceeded those of the city average. Table 34 presents the average speed of buses by time of day in miles per hour. The average speeds of each route, when a statistically meaningful number of records were available, are presented in Appendix C.

Table 34. Average Bus Speeds by Time of Day

Time Period	6 To 10 AM	10 AM To 3 PM	3 To 7 PM	7 PM To 12 AM	12 To 6 AM
5 Borough Average	8.2	7.5	7.6	9	11.5
Queens Average	8.6	8.1	7.9	9.6	11.9
NE Queens Average	9.1	8.5	8.3	10.1	12.2

Vision Zero

In February 2015, NYCDOT released the Queens Pedestrian Safety Action Plan under the Vision Zero initiative. The report identifies priority areas, corridors, and intersections in the borough. The MTA is actively involved in this initiative to lower accidents in Queens. Flushing and Jamaica are two Vision Zero priority areas that contain a large number of buses. The Northeast Queens buses that operate on the Vision Zero Priority Corridors and Intersections are listed in Tables 35 and 36.

Table 35. Vision Zero Priority Corridors

Street Name	From	To	NE Queens Bus Routes
Union St	25 Rd	Franklin Av	Q16, Q20
Sanford Av	Delong St	Northern Blvd	Q12
Kissena Blvd	Parsons Blvd	Main St	Q17, Q25, Q34
Main St	Northern Blvd	Queens Blvd	Q20, Q44
Hillside Av	Myrtle Av	Langdale St	Q1, Q17, Q43, Q76, X68

Roosevelt Av (East Leg)	College Pt Blvd	Northern Blvd	Q48
Queens Blvd	Queens Plz	Jamaica Av	Q60, X68
Bowne St	Northern Blvd	Rose Av	Q65
Northern Blvd (East Leg)	College Pt Blvd	Glenwood St	Q12, Q13, Q28, QM3
Parsons Blvd (North Leg)	Rose Av	144 Pl	Q25, Q34

Table 36. Vision Zero Priority Intersections

Intersection	NE Queens Bus Routes
169 St/Av & Francis Lewis Blvd	Q16, Q76
169 St/Homelawn St & Hillside Av	Q1, Q2, Q3, Q17, Q30, Q31, Q36, Q43, Q76, Q77, X68
172 St & Hillside Av	Q1, Q2, Q3, Q17, Q36, Q43, Q76, Q77, X68
188 St & 73 Av	Q17, Q88, QM1, QM5, QM7, QM8
205 St & Hillside Av	Q1, Q43, Q76, Q77, X68
Elder Av & Main St	Q20, Q44
Hillside Av/166 St & Merrick Blvd	Q1, Q2, Q3, Q17, Q36, Q43, Q76, Q77, X68
Kissena Blvd & 71 Av	Q25, Q34
Main St & Booth Memorial Av	Q20, Q44
Main St & Roosevelt Av	Q17, Q20, Q25, Q27, Q34, Q44, Q48, Q65
Northern Blvd & 146 St	Q13, Q28, QM3
Parsons Blvd & Hillside Av	Q25, Q34, Q43, Q65, Q111, X68
Roosevelt Av & College Pt Blvd	Q48
Sanford Av & Kissena Blvd	Q17, Q25, Q27, Q34, Q65
Springfield Blvd & Hillside Av	Q1, Q27, Q43, Q88, X68
Union St & 31 Rd	Q20, Q44
Union St & 35 Av	Q16, Q20, Q44
Union St & 39 Av	Q13, Q16, Q28
Union St & Sanford Av	Q65
Union St & Northern Blvd	Q20, Q44
Union Tpke & Main St	Q20, Q44, Q46, QM1, QM5, QM6, QM7, QM8

COMFORT + ENVIRONMENT

Passenger Environment

The MTA’s Passenger Environment Survey (PES) provides an assessment of the on-board conditions encountered by passengers in terms of floor and seat cleanliness, litter, and climate control. Passing scores for climate control require that the average temperature of the front and the back of the bus is between 50°F and 78°F degrees, except when the ambient temperature is above 98°F in which case the temperature must maintain no less than a 20°F differential.

Passing scores for litter require the bus to be essentially litter free with no opened or spilled food nor rolling bottles/cans. In order to be considered passing, floors and seats are required to be essentially dirt-free (i.e., no sticky, wet spots or unusable seats), with allowances for irreparable “ground in” spots.

Local buses in Northeast Queens have less litter and are generally cleaner than buses citywide. Climate scores are lower than buses in the rest of New York City. Express buses in Northeast Queens have less litter than express buses citywide. They are just as clean on the interior, but less clean on the exterior.

Table 37. Passenger Environment Survey – Local & Limited

	Northeast Queens	Citywide
Litter-Free	90%	88%
Cleanliness (Exterior)	97%	95%
Cleanliness (Interior)	95%	92%
Climate	92%	95%

Table 38. Passenger Environment Survey – Express

	Northeast Queens	Citywide
Litter-Free	93%	87%
Cleanliness (Exterior)	79%	90%
Cleanliness (Interior)	92%	92%

Loading Guidelines

The MTA has adopted service and loading guidelines to ensure that the proper level of bus and subway service is provided. For buses, these guidelines are a function of where along the route the bus has its highest number of riders on board. This location is called the maximum load point. Schedule guidelines (which establish the minimum service frequencies or average headways for bus and subway service) apply when ridership is low; loading guidelines apply when ridership is high.

On routes where demand is high, loading guidelines determine the appropriate level of service based on the maximum load point, or the greatest number of customers riding at one time along a route. The number of customers can vary by the frequency of service, time of day, day of week, vehicle size or type, and route type. MTA loading guidelines reflect this variation.

There are several important characteristics of loading guidelines:

- Loading guidelines are based on the maximum load point on a bus or subway route in the peak direction. The number of customers at other locations along the route, and in the reverse direction, is lower (often much lower) than the maximum load point.
- Loading guidelines are an average for each time period. For example, bus loading guidelines call for a seated load, with no standees, on routes operating on six-minute headways during weekday middays. This guideline does not guarantee that no customers will stand; it does ensure that, on average, buses will carry a seated load of customers during the weekday midday time period.
- Loading guidelines are designed for optimal operations. When crowds on buses and trains exceed loading guidelines, a lack of internal circulation of passengers during stops because boarding and alighting slow down. Individual delays build and reinforce each other throughout the system resulting in system-wide service delays.
- Loading guidelines for frequent service require full buses prior to scheduling additional trips. However, less frequent routes will receive additional scheduled trips once a not-quite full bus has reach a certain load level on a sliding scale. This encourages ridership by scheduling more frequent service than demand would otherwise warrant and making even lower-frequency routes an attractive and viable option.

Loading Guidelines for Local Bus

Loading guidelines vary across route type, time of day/week and bus size. Guidelines outline the most common service intervals (headways) for standard and articulated buses, grid and feeder routes, and for peak periods, off-peak periods (includes middays, early evenings, and weekends), and late evening. During overnight periods, service frequency will generally be governed by the schedule guideline's minimum frequency of 60 minutes.

Average Peak Load

Peak load is the number of passengers on a bus at its busiest point. MTA loading guidelines do not refer to individual buses. These guidelines refer to the peak number of passengers on a specific route, averaged over a given period of time (½ hour during the peak, one hour during off-peak).

Route Type

Routes are characterized as grid or feeder service. Grid routes constitute most local bus routes. Grid routes operate through multiple neighborhoods with customers boarding and alighting throughout the length of the route. Feeder routes primarily carry customers from outlying areas to a subway station or major terminal, with most customers having a common origin or destination. Feeder routes are permitted to carry more customers per bus because there is less need for internal circulation due to the common origin or destination.

Feeder routes in Northeast Queens include the Q1, Q13, Q15, Q15A, Q16, Q26, Q28, Q36, and Q64.

Frequency of Service

During peak hours, most bus service is scheduled so that all seats can be filled and some passengers will be standing at the route's busiest point, i.e., the number of passengers exceeds the number of seats when the bus is most crowded. For example, the MTA will not add buses to a peak-period grid route with 5-minute headways until a 40-seat bus has more than 54 peak-point riders, on average. As bus frequency decreases, the allowable average peak load also decreases.

Table 39. Current Loading Levels Compared to Loading Guidelines (NYCT Routes Only)

Route	Weekday				Saturday				Sunday			
	AM Peak Hour	Mid (1pm-2pm)	PM Peak Hour	Eve (8pm-9pm)	AM Peak Hour	Mid (1pm-2pm)	PM Peak Hour	Eve (8pm-9pm)	AM Peak Hour	Mid (1pm-2pm)	PM Peak Hour	Eve (8pm-9pm)
Q1	91%	54%	86%	68%	64%	64%	95%	61%	63%	51%	75%	58%
Q12	96%	94%	90%	99%	91%	97%	93%	95%	93%	81%	83%	80%
Q13	97%	78%	86%	87%	95%	80%	77%	89%	88%	86%	78%	76%
Q15	93%	68%	86%	84%	63%	83%	73%	90%	75%	93%	83%	78%
Q16	86%	76%	92%	80%	78%	58%	67%	40%	44%	53%	72%	74%
Q17	90%	69%	86%	99%	94%	99%	90%	91%	97%	88%	82%	83%
Q20*	90%	84%	88%	88%	--	--	--	--	--	--	--	--
Q26	86%	--	80%	91%	--	--	--	--	--	--	--	--
Q27	91%	96%	81%	87%	96%	95%	86%	96%	91%	82%	88%	91%
Q28	97%	93%	99%	73%	78%	76%	78%	75%	94%	82%	91%	69%
Q30	99%	83%	94%	95%	81%	82%	92%	62%	67%	81%	94%	65%
Q31*	91%	89%	89%	62%	--	--	--	--	--	--	--	--
Q36	93%	79%	91%	89%	79%	82%	79%	73%	54%	93%	70%	40%

Q43	97%	92%	91%	96%	97%	97%	97%	88%	90%	90%	79%	100%
Q44	92%	98%	91%	90%	94%	95%	100%	94%	95%	80%	86%	75%
Q46	93%	88%	93%	98%	98%	96%	98%	77%	86%	85%	87%	86%
Q48	71%	52%	72%	70%	79%	92%	67%	83%	44%	45%	33%	54%
Q58	89%	94%	86%	76%	87%	89%	89%	99%	88%	95%	91%	88%
Q76	60%	92%	97%	57%	60%	92%	97%	57%	--	--	--	--
Q88	100%	87%	92%	81%	100%	87%	92%	81%	69%	82%	89%	97%
X68	97%	--	87%	--	--	--	--	--	--	--	--	--

*Q20 Saturday and Sunday service is scheduled with the Q44. Q31 weekend service

Schedule Guidelines

Schedule guidelines establish the minimum service frequencies for bus and subway service. This is intended to maintain basic mobility coverage throughout MTA's service area. The minimum frequencies for bus and subway service vary by time of day and by day of week. In many cases, however, routes need to operate at shorter intervals than the guideline minimums in order to accommodate higher ridership levels. In these cases, loading guidelines match service to the number of riders using a particular route at a given time.

Minimum Service Frequencies

Local Bus

- *All Times except Late Nights*: If service is provided, it should operate at least every 30 minutes.
- *Late Nights (1 a.m. – 5 a.m.)*: If service is provided, it should operate at least every 60 minutes.

Express Bus

- *Weekday Peak Periods and Weekday Middays*: If service is provided, it should operate at least every 30 minutes.
- *Weekday Evenings and Weekends*: If service is provided, it should operate at least every 60 minutes.

Bus Stop Furniture

Several furnishings enhance the comfort and environment at bus stops, including shelters, seating, and customer information in Guide-a-Ride canisters. MTA bus stops in the city are delineated by two types of signage. All NYCT bus stops have lollipop signs displaying the bus route numbers, bus destinations, and stop location. MTA Bus Company bus stops that are shared with NYCT have lollipop poles as well, but some bus stops served exclusively by MTA Bus Company routes have simple metal pan signs only displaying route numbers.

Bus Shelters

In Northeast Queens, 27.6% of bus stops have bus shelters, compared to 25.2% in all of Queens and 27.2% citywide. The Q50 and Q34 have the highest percentage of bus shelters per stop, with 44.6% and 44.3% of the respective stops enhanced with bus shelters. The route with the smallest percentage of shelters at bus stops is the Q19, for which less than 12% of bus stops have shelters.

Bus Stop furniture is under the jurisdiction of NYC DOT, not the MTA. While the MTA supports the installation of bus shelters and benches as a way to improve customer comfort, community requests for additional locations should be transmitted to NYC DOT for consideration.

Table 40. Bus Stop Shelters in Northeast Queens

Bus Stop Shelters	Number Of Shelters	Number Of Bus Stops	% of Bus Stops With Bus Shelter
Citywide	6,747	24,798	27.2%
All Queens Routes	2,065	8,195	25.2%
Study Area Routes	896	3,252	27.6%

CUSTOMER COMMUNICATION

The last evaluation criteria for the quality of bus service is the availability of information for customers and the communication of this data. Three ways that the MTA shares bus schedule information with customers are Guide-a-Ride canisters at bus stops, Bus Time on phones and computers, and public timetable pamphlets with maps on buses and at www.mta.info. In partnership with NYCDOT, real-time information displays have been established at selected bus stops throughout the city and additional locations are being studied.

Guide-a-Ride

Guide-a-Ride canisters contain maps and schedules of the routes serving each stop to help customer navigation. All NYC Transit bus stops have Guide-a-Ride canisters and almost every MTA Bus Company stop has them as well. Guide-a-Ride canisters have been installed on NYCT bus routes for many years, but were installed on MTA Bus Company routes in the study area within the past few years. The MTA Bus Company is working to install canisters at the few remaining bus stops where canisters are absent. The information is updated whenever the bus schedule or bus route is changed.

Bus Time

In addition to printed Guide-a-Ride maps and schedules, Bus Time offers bus riders advance information on approaching buses via the internet on computers, smartphones, and other web-enabled devices, as well as via SMS message from cell phones. It uses Global Positioning System (GPS) hardware and wireless communications technology to track the real-time location of buses. Bus Time has been available for all Queens buses since March 2014. This technology allows riders to see how far buses are from their stop for any given route, to predict wait times. It can also be used at home so that riders can choose to leave just in time to meet their bus at their stop.

By taking advantage of Bus Time, riders can better decide which bus route to utilize when multiple options exist, especially in the event of service disruptions or incidents. Riders can also take advantage of broadcasted public service alerts through the MTA website and apps to learn about any incidents or delays affecting service.

Printed Customer Information

Printed bus timetables and maps are available on buses and at the Customer Service Center at 3 Stone Street in Lower Manhattan.

5. PUBLIC INPUT

During the course of the Northeast Queens Bus Study, the MTA received public input from bus customers, local residents, and elected officials through several channels. MTA staff attended Public Transit/Transportation Committee meetings of Queens Community Boards 7, 8, 11 and 13, whose jurisdictions are part of the study area. Meetings were held between October 2014 and January 2015. These meetings covered ongoing issues related to bus service, and issues related specifically to this study. Follow-up meetings were held in March and April of 2015 to discuss early findings and to gather additional comments.

On Thursday, February 26, 2015, the MTA conducted a public workshop at Queensborough Community College to speak directly with community members and receive input on possible improvements to bus service in Northeast Queens. More than 100 community members participated in the workshop. MTA staff elicited travel patterns, feedback on problem locations, and suggestions for better service. Community members gathered around large maps to draw and label specific sites in need of improvement. MTA staff note takers received comments from individuals, and many individuals submitted additional written comments. In addition, elected officials elicited input from their constituents and transmitted this input to the MTA for consideration.

Hundreds of comments and suggestions were submitted during the course of this study. The comments ranged from large-scale, long-term issues, such as a desire for a bus terminal in Flushing, to smaller, localized issues. Some of these broader issues are addressed on the following pages, while more specific issues are addressed in a Question-and-Answer section in Appendix A of this document. While all comments were evaluated and considered by the MTA, not all of these comments could be addressed within the scope of this report.

Service Issues

Local-Limited Service

Comments were received regarding bus routes that have both local- and limited-stop spacing patterns of service, and regarding the allocation of buses to each kind of service. For some bus routes that only have local bus service, there were suggestions to add a limited-stop component of service. There were also suggestions for some of the longer bus routes that limited-stop spacing service be run for part of the route, and then local-stop spacing service be run the remainder of the route.

Limited-stop bus service is determined by MTA Service Guidelines. Design guidelines for limited-stop bus service are as follows:

Limited-stop routes typically take one of two forms: full-length limited service or limited & short-turn local service.

- Full-length Limited Service: Limited bus stops are spread over an entire route. This service pattern caters to riders making longer trips (at least three miles) with destinations scattered throughout the route.
- Limited & Short-turn Local Service: This service pattern divides a route into three zones—an outer zone, an inner zone, and a Central Business District (CBD). Service along the route is shared between local and limited services, where all stops in the outer zone and most stops within the CBD are served by a limited route, and all stops in the inner zone and the CBD are served by the local route.

The MTA will consider the introduction of limited-stop service on local bus routes where passenger loading guidelines support headways of six minutes or less, for a span of at least two hours. This would result in local and limited services, each operating every 12 minutes. The duration of six-minute local service will dictate the span for limited-stop service. For example, if service on a local bus route operates every six minutes during peak periods and every ten minutes during middays, then limited-stop service would be considered for the peak period but not for the midday period. Similarly, limited-stop service may be unidirectional or bidirectional during peak periods.

While the span of six-minute local service will identify candidate routes for limited-stop service, further analysis is required to determine whether limited-stop service is appropriate. The most significant factor is the boarding and alighting pattern of customers along the route; there must be a sufficient concentration of customers at a small number of stops, which would then be designated as stops on the limited stop route. Limited-stop service works best with spacing of bus stops approximately every half-mile.

Exceptions to the above standard include:

- Routes that are exclusively limited, with parallel or alternate local services (e.g., Q44 Limited and the Q20A/Q20B Local).
- Feeder routes with simultaneous trip departures, one operating local and one operating limited, despite the lack of six-minute service frequencies

The MTA is studying the concept and feasibility of limited-zone bus service, a new service that has features of limited and express bus service. See Section 6: Recommendations for additional information about potential service changes on these routes and limited-zone service. In Northeast Queens, the Q12 and

Q88 are being considered for limited-stop service. The Q12, Q17, Q27, Q43, Q46, and Q88 are being considered for limited-zone bus service.

Select Bus Service

Comments were received regarding bus routes that customers believe would benefit from the features of Select Bus Service. Specific requests were made for certain routes (e.g., Q46, Q27) and corridors (e.g., Horace Harding Expressway and Northern Boulevard) to be converted into SBS routes.

Select Bus Service is a joint effort of the MTA and NYCDOT. The establishment of SBS routes is currently being guided by the corridors identified in the 2009 Bus Rapid Transit study which was prepared by the MTA, NYCDOT, and the New York State Department of Transportation. The study was conducted to identify corridors suitable for SBS treatment through a series of quantitative evaluations and incorporating public feedback and comments.

The MTA and NYCDOT will continue to develop SBS routes that benefit existing bus riders, provide an attractive transit option to potential new customers, and are sensitive to the needs of local residents and businesses. New corridors are chosen based on ridership potential, transit need, geographic diversity, opportunities for bus priority treatments, and community support. Additional information on the selection of SBS routes and future potential SBS routes in Northeast Queens is available in Section 2: Bus Service and Schedule and Section 6: Recommendations in this report.

Bus Shuttles

Suggestions were also made for short shuttle bus routes with high frequencies and specific purposes, such as crossing the Throgs Neck Bridge.

Short shuttle bus routes are most useful when transporting customers back-and-forth between two high-density cores. Unfortunately the physical makeup of Northeast Queens does not enable frequent shuttles to be operated with any real efficiency or effectiveness. Northeast Queens has few places that exist at a level of density sufficient to enable high ridership for these kinds of shuttles. The best candidate for a frequent service between two high-density nodes in the study area is between Flushing and Jamaica. The MTA is working in conjunction with NYCDOT to implement SBS on the Flushing-Jamaica corridor with the Q44 designated for SBS implementation in late 2015 and the Q25 Limited designated for SBS implementation at a later date.

Short-turn Service

Some comments indicated that short-turn variations were less useful than buses that serve the entire length of the route. Some comments indicated that the locations of existing turnarounds for short-turn service are poorly designed and cause more problems than the benefits created. Some comments desired short- turns to deviate from the main route and serve other nearby destinations.

While most of the bus trips for a bus route operate the full length of the route, at certain times of the day, it is necessary for some buses to serve the busiest portion of the route and reach the maximum number of riders. By serving the busiest segments of a route, those buses can make additional trips within a shorter time period, thereby increasing the efficiency of a route without increasing operating costs. These trips, known as short-turns, increases service to the areas of a route that have the highest ridership.

The MTA evaluates routes to determine if a section should receive additional service in the form of a short-turn service. Short-turns on bus routes are not meant to provide service to areas that are not already served by the underlying route. That type of service is provided by service route “variants” or a “branch”. Short-turns are reevaluated as needed over time to ensure that they are providing the best service for the route.

Multiple Routes that Operate on the Same Streets

Comments were received that suggested that if more than one bus travels along a portion of a roadway together, that one of them should either be moved to a parallel street or run limited-stop spacing service.

There are three principal reasons why more than one bus route might operate on the same street. The first is that the street may be a high-density corridor that has a large concentration of residential, commercial, and community facilities. In Northeast Queens, these corridors include Main Street, Kissena Boulevard, Parsons Boulevard, Hillside Avenue, and Northern Boulevard. Secondly, local and limited service usually operate in conjunction and provide two different types of service along the same route. Lastly, the street network in Northeast Queens is very complex with a limited number of streets that offer straight, direct access between neighborhoods, subway stations, and points of interests. Bus service is more reliable when operated in a straight line than when many turns exist along the route.

Another consideration is that by placing multiple bus routes on one shared corridor, the wait time for a bus is significantly reduced for many customers who need to travel within that corridor. Splitting bus routes on different corridors would result in the need to install bus stops and eliminate on-street parking for residences and businesses.

Separate Busy Bus Stops from Each Other and Less-busy Stops

Comments were received regarding the desire for bus stops that are currently located together to be separated and therefore to provide more room for each individual bus route to be served by its own dedicated stop. Several comments were received about the combination of stops for popular bus routes crowding out riders of other buses. It was stated that some buses will drive past a location because the bus operator believes that the waiting passengers are only waiting there for a different bus. Comments were received that at evening peak periods, especially at subway stations, there is not enough room on the sidewalk to accommodate all bus riders waiting for the various bus routes that all pick up in the same area.

The MTA continues to evaluate the location of bus stops and the ridership at each stop. When a bus service increases in ridership and additional service is added to accommodate the additional passengers, the MTA evaluates the stops to look for ways to create a better passenger environment. While bus stop locations are requested by the MTA, the final determination on location and space allocation is made by NYCDOT. The MTA works closely with NYCDOT to determine what bus stops can be appropriately adjusted on a stop-by-stop basis. The MTA will continue to adjust bus stops as ridership patterns change.

Schedule Issues

More Service / More Buses / Increased Frequencies

Many comments were received requesting increased frequencies of specific bus routes, as well as overall service increases.

As with most public transit agencies, the MTA has service and loading guidelines to ensure the proper level of bus service is provided. Loading guidelines are described in Section 4: Quality of Service of this report.

Schedule of Buses on Nights and Weekends

Comments were received regarding the hours operated on various routes, and the desire for both earlier and later trips for various routes. Comments were received regarding the minimum time between buses. Comments were received about the desire for lower headways on many routes. Comments were received regarding express buses operating on weekends with 60-minute headways. Comments stated that the maximum headway for a bus to be useful is every 30 minutes, not every 60 minutes.

Schedule guidelines establish the minimum service frequencies and maximum headways for service. This is intended to maintain basic mobility throughout the MTA's service area. Schedule guidelines state that if local bus service is provided late at night (1 a.m. to 5 a.m.), it should operate at least every 60 minutes. Schedule guidelines for express bus service state that service should operate at least every 60 minutes during the span of time that service is provided. While more frequent service would be welcomed by many, oftentimes existing ridership does not justify additional trips to be added to a service. Additional information about schedule guidelines can be found in Section 4: Quality of Service of this report.

Express Bus Departure Times

Comments were received regarding express buses that leave their stops in the morning earlier than the scheduled time.

During the course of this study, the MTA examined the on-time performance of express routes in Northeast Queens. It was found that some buses were indeed leaving early from pick-up stops on their way to Manhattan. The MTA will continue to monitor bus performance and make adjustments as necessary to provide the best experience for our customers. Some of these stops are designated timepoints in the published public timetables. These official "timepoints" are assigned to selected bus stops to maintain proper spacing between buses. Bus operators are instructed not to depart these timepoints ahead of the published time.

It should be noted that the bus stop times that are available through TripPlanner+ on the MTA's website, or at the bus stop information panels, but are not listed in the published timetables pamphlets, are estimates. These estimates are calculated based on the official timepoints listed in the timetable pamphlets. The allotted travel times between bus timepoints are highly dependent on roadway congestion, which is not always consistent from one day to another. It would be infeasible for bus operators to know the estimated bus stop times for all stops made on a route, and only the specific timepoints listed in the public timetable pamphlets are given to bus operators.

In order to make sure that you are able to catch your bus, please arrive at your stop at least five minutes before the estimated departure time. Additional information about wait assessment and on-time performance for buses can be found in Section 4: Quality of Service of this report.

Bus Bunching

Comments were received regarding bus bunching on many of the routes in Northeast Queens. Many complaints were lodged about specific areas and specific routes that get bunched up.

Bus bunching is caused by many factors including variations in traffic, the amount of time it takes for customers to load buses, building construction, utility repairs, traffic congestion, and unanticipated emergency or police activity. Each of these factors by themselves or in combination can lead to bus bunching on a route.

When available, on-street bus dispatchers are assigned to critical locations to monitor and adjust bus spacing as necessary. This may include holding a bus at a stop momentarily so that it will not immediately follow the bus that is directly ahead of that bus, or conversely the first bus may be directed to jump ahead and bypass the next several stops.

In addition to on-street supervision, the MTA deploys the new Bus Time technology to aid in the mitigation of these issues. Bus Time, which provides information for passengers based on the GPS location of the bus, provides essential information to MTA operations staff so that they can better adjust the timing and distribution of buses along the route. The system is new, and the MTA will continue to make more effective use of it to provide a better experience for all of our passengers.

Reliability

Comments were received regarding the reliability of buses in Northeast Queens. Complaints were made about late buses, buses that never arrive, and buses that are slow and take too long to reach their destination.

MTA uses three principal metrics for measuring reliability of its routes: on-time performance, wait assessment, and road reliability. Generally, Northeast Queens bus routes perform better than the Queens and citywide averages for all three metrics. Detailed analysis of bus performance indicators by route are outlined in Section 4: Quality of Service of this report.

Bus delays can be caused by a number of factors as noted above in Bus Bunching. Often congestion is the contributing factor to late buses. This is particularly true during the morning and evening peak periods and in congested Downtown Flushing and Downtown Jamaica. Bus delays can also be caused by mechanical issues and accidents.

“Not in Service” is a display sign used when buses are running along city streets but are not available to pick up passengers. Buses may not be in service for several reasons, sometimes due to mechanical issues, returning to the depot at the end of the bus operator’s shift, or when the bus itself is transitioned from one route to serve a different route (this is known as “interlining”).

In some instances, buses display “Next Bus Please” when they are delayed and have been informed by dispatchers to jump ahead and not accept any new passengers, but continue to discharge passengers when requested. This is usually done in conjunction when another bus is close by providing duplicative service. This action allows a bus to fill any excessive gaps in service between it and the preceding bus ahead of it.

Bus Schedule Coordination with Subway and LIRR

Comments were received regarding transfers that were missed where the customer saw the bus pulling away from the stop just as the passenger was attempting to transfer from the subway or the Long Island Railroad to the bus.

The MTA adjusts schedules periodically, and attention is paid by staff scheduling buses to the ever-changing subway and railroad schedules. Each mode of travel has different constraints on the system, and efforts are made to coordinate schedules to the extent possible. As an example, the Long Island Railroad trains that stop at Little Neck during the evening commute arrive in an erratic pattern. Some trains are scheduled 37 minutes behind the previous train, while some are scheduled 3 minutes behind the previous train. In order to ensure reliability along the entire Q36 route, buses are scheduled to leave the Little Neck station at even time intervals every 30 minutes. In order to provide timely service to passengers waiting further along the bus route and an even distribution of passengers on the buses, buses cannot be held for an extra 6 or 7 minutes until the next train arrives. Bus reliability starts with timely departures from the first stop. Additionally, holding a bus for too long at a bus stop will be an inconvenience to those customers who are already on the bus.

Bus Service To/From Schools

Comments were received regarding the many groups of students who ride the city's buses. Additional comments were received requesting additional buses at school dismissal times to alleviate overcrowding on buses clogged with many students all being released at the same time.

The MTA continues to monitor ridership and crowding on buses and make adjustments over time. The MTA schedules extra trips on school days to alleviate overcrowding caused by high volumes of students requiring bus service at the time of dismissal. These dedicated extra trips operate on several routes in Northeast Queens, available for students and the general public. These extra trips originate near schools around dismissal times and continue making all stops along the normal service pattern for the remainder of the route. School dismissal times can change without advanced notice to the MTA, making it difficult to meet the student needs at various times.

Amenities and Facilities Issues

Flushing Bus Terminal

Many comments were received regarding Downtown Flushing, where many bus routes intersect at the terminus of the 7 train. In addition to suggestions for overall improvements in the location of transfers and bus stops, specific requests were made for a bus terminal to be built in Downtown Flushing.

As Northeast Queens and Downtown Flushing continue to grow, so does the need for improved transit in the area. The MTA continues to explore opportunities for an off-street bus terminal in Downtown Flushing to help customers transferring to the subway and other bus routes. A bus terminal would also help improve bus operations. Available space is very constrained in Downtown Flushing. Opportunities are extremely limited for locations that both add convenience for customers and work within the traffic network. Additional information about the challenges related to establishing a bus terminal in Downtown Flushing is available in Section 6: Recommendations of this report.

Bus Lanes

Comments were received regarding the allocation of street space. Some suggestions were made for certain roads to be turned into bus-only streets, while certain roads were suggested to receive dedicated bus-only lanes.

The MTA works closely with NYCDOT regarding the allocation of street space. NYCDOT owns and manages the public streets in New York City, and it carefully weighs the benefits of bus lanes for individual roads. There is no one-size-fits-all approach to road space allocation, and what works in one place will not necessarily work in another. NYCDOT and the MTA look at the possibility of bus lanes as part of special projects, such as the implementation of Select Bus Service. In addition, some areas that are subject to redevelopment receive special attention to determine if bus lanes would be helpful and better allocate road space.

Bus Shelters

Comments were received regarding bus shelters, especially the desire for bus shelters to be installed at specific locations. Comments were received about the desire from seniors for seating to be available at bus stops, as standing long periods while waiting for the bus is a hardship on them. Some suggestions were made that all bus stop should have bus shelters.

Bus Stop furniture is under the jurisdiction of NYCDOT. While the MTA supports the installation of bus shelters and benches as a way to improve customer comfort, community requests for additional locations should be forwarded to NYCDOT for consideration. Additional information about Bus Shelters in Northeast Queens can be found in Section 4: Quality of Service of this report.

Bicycle Racks on Buses

Comments were received suggesting that the MTA install bicycle racks on buses. Special mention was given to transportation infrastructure that do not allow bicycles and the nearby neighborhoods that would therefore benefit most from bicycle racks on buses.

Bicyclists are not allowed to ride across the Whitestone Bridge or the Throgs Neck Bridge that span from Northeast Queens to the Bronx. Though buses do not currently have bicycle racks, folding bicycles are permitted aboard local and limited buses at all times. Please fold your bicycle before boarding and don't block the aisle or doors. Folding bicycles are not allowed on express buses. All other bicycles are prohibited on buses.

The MTA is conducting a one-year pilot program for bicycle racks on the S53 and S93 bus routes that connect Port Richmond and the College of Staten Island to Bay Ridge, Brooklyn via the Verrazano-Narrows Bridge. The Verrazano-Narrows Bridge, like the two bridges in the study area, lacks any bicycle facilities and prohibits bicycles, leaving limited options to travel by bicycle from one borough to the other. Any expansion of bicycle racks on MTA buses will depend on the results of the evaluation of this pilot.

Other Issues

MetroCard Vending Machines

Comments were received regarding MetroCard vending machines and their locations. MetroCard vending machines are located at subway stations, but not in other locations in Northeast Queens easily accessible to customers who don't use the bus to travel to subway stations.

In order to fulfill the need for MetroCard services beyond subway locations, the MTA maintains a MetroCard Bus and a MetroCard Van. These dedicated vehicles travel around the five boroughs, making regularly scheduled stops at senior citizen centers, shopping centers, and along major bus routes. You can take care of all your MetroCard business at the MetroCard Bus or Van, whether it's applying for or refilling a Reduced-Fare MetroCard, buying or refilling a regular MetroCard, or asking a MetroCard-related question. You'll get prompt, attentive service, right in your own neighborhood.

Table 41 contains a listing of the locations, dates, and times that the bus and van are scheduled to visit various locations throughout Northeast Queens as of the publishing of this report. Please note that changes are made periodically to the schedules and locations and these details may have changed by the time you read this. Please visit <http://web.mta.info/metrocard/mcbus.htm> for the latest times and locations.

Table 41. MetroCard Bus/Van Locations

Location	When	Time	Vehicle
Bay Terrace Shopping Center (Bell Blvd & 24 Av)	2nd & 4th Mon	9 AM - 11 AM	Bus
Bell Park Manor at Hillside Av & Braddock Av	4th Wed	12:30 PM - 2:30 PM	Van
Flushing at Main St & Roosevelt Av	1st & 3rd Fri	8 AM - 2 PM	Bus
Fresh Meadows Shopping Center (Horace Harding Expressway & 188 St)	2nd & 4th Mon	12 PM - 2:30 PM	Bus
Glen Oaks Shopping Center (Union Turnpike & 260 St)	2nd Wed	11:30 AM - 1:30 PM	Van
Glen Oaks Shopping Center (Union Turnpike & 260 St)	4th Wed	11:30 AM - 1:30 PM	Bus
Hollis at Franhill Shopping Center (Francis Lewis Blvd & Hillside Av)	4th Wed	9:30 AM - 11:30 AM	Van
Queens Center For Progress (81-15 164 St, Off Goethals Av)	1st Fri	12:30 PM - 1:30 PM	Van
Windsor Park At 73 Av & Bell Blvd	2nd Wed	8:30 AM - 10:30 AM	Van
Kew Gardens at Queens Borough Hall	Last Tues	10 AM - 12 PM	Van

Some additional locations are selected specifically to serve seniors who are less able to travel to the locations listed above. Again, please note that changes are made periodically and these details may have changed.

Table 42. MetroCard Bus/Van Senior Locations

Location	When	Time	Vehicle
North Shore Towers 272-40 Grand Central Pkwy, Floral Park	3rd Tues	1 PM - 3 PM	Van
Bayside Senior Center 221-15 Horace Harding Expwy, Bayside	4th Fri	10 AM - 11:30 AM	Van
SNAP of Eastern Queens 80-45 Winchester Blvd. Bldg #4, Queens Village	4th Thur	9:30 AM -10:30 AM	Van
Clearview Assistance Program 163-59 17 Av at 166 St, Whitestone	4th Wed	9 AM - 10:30 AM	Bus
Korean American Senior Center of Flushing at 42-15 166th St.	4th Fri	1PM - 3:00 PM	Van

Customers in Northeast Queens also have other opportunities to purchase a MetroCard in their neighborhood. Pre-valued Pay-per-Ride and Unlimited-Ride MetroCards are available for purchase at participating neighborhood merchants (the \$1 new card fee does not apply for cards purchased at these merchants). All Long Island Rail Road station ticket vending machines and staffed ticket windows sell pre-valued \$5.50 and \$25 Pay-per-Ride MetroCards (\$1 new card fee applies). Customers may also open an EasyPayXpress MetroCard on-line account, which enables customers to replenish value or time on their MetroCard using a credit card or debit card.

Passengers with Disabilities

Comments were received regarding customers with disabilities and their ability to access buses.

All buses are ADA-accessible to customers via lifts and ramps. In fact, New York City has the largest fleet of accessible buses in North America. In addition, 103 New York City subway stations & Staten Island Railway stations are accessible to people with disabilities, and all Port Washington branch LIRR stations in Northeast Queens, except for Flushing-Main Street, have wheelchair access¹. Bus stops are placed in locations that are accessible to persons with disabilities. When a bus stop becomes inaccessible due to vehicles blocking the bus stop or snow and ice preventing the bus from reaching the curb, bus operators will make sure to find ways to accommodate persons with disabilities to ensure that they are given the same access to transit services that all riders receive.

¹ Northeast Queens LIRR stations Little Neck, Douglaston, Bayside, Auburndale, Broadway, and Murray Hill all provide wheelchair elevator and/or ramp access. Additionally, Penn Station, Woodside, Great Neck, Manhasset, Plandome and Port Washington also provide wheelchair elevator and/or ramp access. Mets-Willets Point does not currently have wheelchair access. Flushing-Main Street will soon be getting wheelchair access as part of an ongoing capital project at this station that involves millions of dollars of investment in Downtown Flushing by the MTA.

6. RECOMMENDATIONS

This section outlines the primary recommendations for service modifications in Northeast Queens. Some recommendations are already slated for implementation, or can be implemented within several months. Many of the recommendations require funding that is not available at this time, but when funding becomes available, these initiatives will be implemented where possible. Other recommendations will require further analysis and study.

SUMMARY OF CHANGES

The following is a summary of the proposed service changes:

Short-term Recommendations

- Modify the Q65 travel path in Flushing to provide more reliable service and to provide all-day service on Parsons Boulevard alongside the part-time Q26
- Continue to schedule additional trips such as those on the Q12, Q13, Q28, and Q58 that were added for Summer 2015 as part of ongoing schedule changes
- In conjunction with the initiation of Q44 SBS, create 24-hour service on the Q20A
- Analyze the feasibility of overnight and all-day service on the Q13, Q30, and Q88
- Continue to adjust running time on all routes to improve schedule adherence

Long-term Recommendations

- Implement a pilot program for limited-zone bus service on one or more Northeast Queens bus route, possibly to include the Q12, Q17, Q27, Q43, Q46, and Q88
- Analyze the feasibility of limited-stop service on the Q12 and Q88 bus routes
- Study alternatives to expand north-south service throughout the study area
- In addition to the two SBS routes along the Flushing-Jamaica corridor, implement additional Select Bus Service along major transit corridors, possibly to include Hillside Avenue, Northern Boulevard, and Union Turnpike
- Explore creation of a Downtown Flushing Bus Terminal in conjunction with new development and redevelopment occurring in the area

SHORT-TERM RECOMMENDATIONS

Service Change

Route Modification

Modification of Q65 Travel Path (MTA Bus Company)

During the study period, input was received from the public regarding the travel path of the Q65 in the vicinity of Flushing Hospital, a Jewish community center, and a Hindu Temple. A suggestion was made to reroute the Q65 in Flushing from operation on Bowne Street and 45th Avenue instead onto Parsons Boulevard and Sanford Avenue. 45th Avenue and Bowne Street in this area are relatively narrow streets. The suggestion would allow the Q65 to operate on Parsons Boulevard and Sanford Avenue, which are wider streets. With wider streets and fewer turns, service will become faster and more reliable for all Q65 customers riding in this area.

This portion of Parsons Boulevard is currently utilized only by the peak-period Q26. This revision to the Q65 travel path would provide this area with all-day and weekend bus service. This portion of Sanford Avenue is utilized by the Q26 and the Q12, as well as NICE bus routes N20 and N21. Some of the Q65

customers will have a slightly longer walk of up to 1-3 blocks (700-1,000 feet) to the new bus stops on Parsons Boulevard.

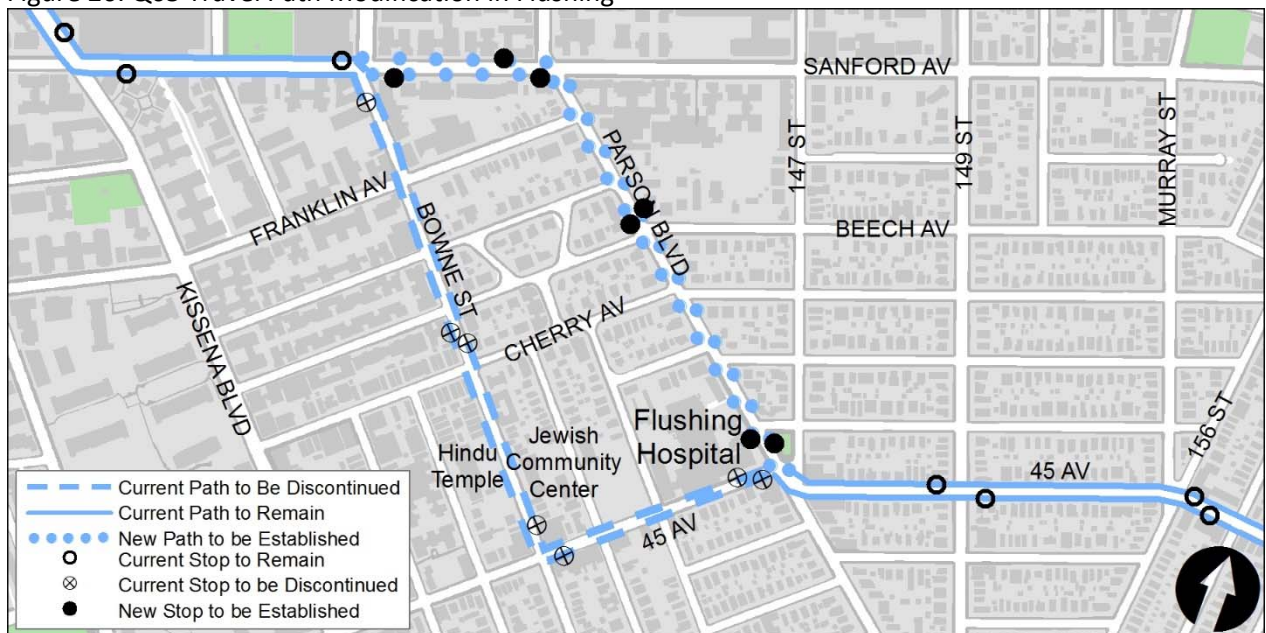
One motivation behind this community suggestion to remove the Q65 from Bowne Street and 45th Avenue is the prospect that NYCDOT could re-evaluate parking on these narrow streets. 45th Avenue and Bowne Street have limited curbside parking on one side, possibly in order to provide adequate space for large vehicles traversing the area, including the Q65 bus. The community has expressed hope that additional curbside parking could be permitted along these streets for users and visitors of Flushing Hospital, the community center, and the temple. Even if the MTA follows through on the travel path revision of the Q65, it is up to NYCDOT to re-evaluate parking along these streets and decide on appropriate parking strategies to accommodate the community and the various land uses in this area.

Benefits: Reduction in the number of turning maneuvers thereby providing faster and more reliable service. Creates all-day and all-week service on this portion of Parsons Boulevard, which currently has peak-period-only service. Reduces the need for a wider travelway along the narrow 45th Avenue and Bowne Street, which potentially enables NYCDOT to introduce curbside parking along these streets, as requested by the community.

Drawbacks: Up to 512 existing customers would have a longer walk of approximately 700 to 1,000 feet to access the Q65.

Cost: Neutral

Figure 26. Q65 Travel Path Modification in Flushing



Schedule Changes

Increase in Trips

Bus passenger loads are estimated from AFC data and verified with manual checks to determine schedule trip changes. These normal, ridership-driven service increases will reduce crowding throughout the entirety of certain routes and reduce wait time between buses. Changes in the number of scheduled trips since 2010 are listed in Section 2: Bus Service and Schedule of this report. Table 43 lists the proposed schedule changes that were implemented in the summer 2015 schedule update.

Table 43. Recommended Additional Trips

Route	Time	Additional Trips
Q12	Weekday	+5.5%
Q12	Sunday	+1.7%
Q13	Weekday	+0.5%
Q28	Weekday	+6.6%

Service Span Increases


Q20A – 24 hour service (NYC Transit)

In conjunction with the initiation of Select Bus Service on the Q44 route, the Q20A is being examined to operate at all times on weekdays and weekends. Currently, the Main Street corridor is served by the Q44 Limited, Q20A, and Q20B during the day. The Q20A/B routes cease operations during the overnight period and the Q44 makes all local stops during these hours. The new Q44 Select Bus Service will operate 24 hours a day, providing a faster trip for customers riding late night hours. To serve the local stops along the corridor, the Q20A would operate overnight as well, providing new 24-hour service to 20th Avenue.




Additional Routes to be Studied for Span Increases (NYC Transit)

Three additional routes are being studied to extend their weekday overnight service span to provide later service. These routes have relatively high ridership and have minimum duplication of existing overnight service, providing effective bus coverage across Northeast Queens. Also, all of these routes connect to subway stations that operate 24 hours. Funding for overnight service will need to be identified and allocated.


Q13

The Q13 has a three hour gap in service from approximately 2 a.m. to 5 a.m. The Q13 would provide the only overnight service on Bell Boulevard in Bayside and Bay Terrace. The Q13 connects to the  Flushing-Main St subway station.

Q30

The Q30 has a four and half hour gap in service from approximately 12:30 a.m. to 5 a.m. The Q30 would provide the only overnight service on Utopia Parkway and Horace Harding Expressway, east of 188th Street. The Q30 connects to the , , and  Sutphin Blvd-Archer Av. Prior to 2010, overnight service was provided on the Q30.

Q88

The Q88 has a six and half hour gap in service from approximately 11:30 a.m. to 6:00 a.m. The Q88 would provide the only overnight service on Horace Harding Expressway, west of Kissena Boulevard. The Q88 connects to the  Woodhaven Blvd station.

Running Time Modifications

Running time is the amount of time scheduled for a bus to travel between two locations along a route. Variability in actual running times are a key indicator as to where problem areas might exist, and whether the schedule adequately reflects real road conditions. When scheduled running times are too short, buses will routinely arrive at stops and terminals late. When a bus begins to fall behind schedule, delays can be compounded by the increased loading times required for the additional passengers who have arrived after the scheduled stop time, who would normally just catch the subsequent bus. Insufficient running time can have a domino effect on later service if the bus arrives late to the final stop that it then leaves late for its next trip in the opposite direction.

Conversely, when the scheduled running time is too long, travel time for passengers on board increases as the bus travels slowly to meet scheduled timepoints. Even worse, the bus may arrive and depart from the scheduled timepoints early, which means that someone who arrives the stop on time will have to wait until the next bus arrives. Adjustments to running times therefore can help improve performance for the adjusted trips, make later service more reliable, and decrease waiting and travel time for customers. Schedule planners can better track and correct these inaccuracies with the increased availability of data from Bus Time.

To improve performance and schedule adherence, several modifications to scheduled running times have been implemented recently, and more will be implemented in the future. The adjustments are made to more closely match observed running times provided by Bus Time data. Running time modifications have been made on many routes this year, including:

Summer 2015: Q12, Q13, Q17, Q28, Q36

Fall 2015: Q15, Q16, Q17, Q20, Q26, Q31, Q36, Q43, Q44, Q46, Q48, Q76, Q88

LONG-TERM RECOMMENDATIONS

Service Changes

Limited-Zone Bus Service

Currently, many routes operate local and limited service in which the local bus makes every stop and the limited bus makes stops every half mile or so along the entire route. The half-mile limited-stop spacing pattern typically serves high bus-to-bus transfer locations or shopping and institutional destinations.

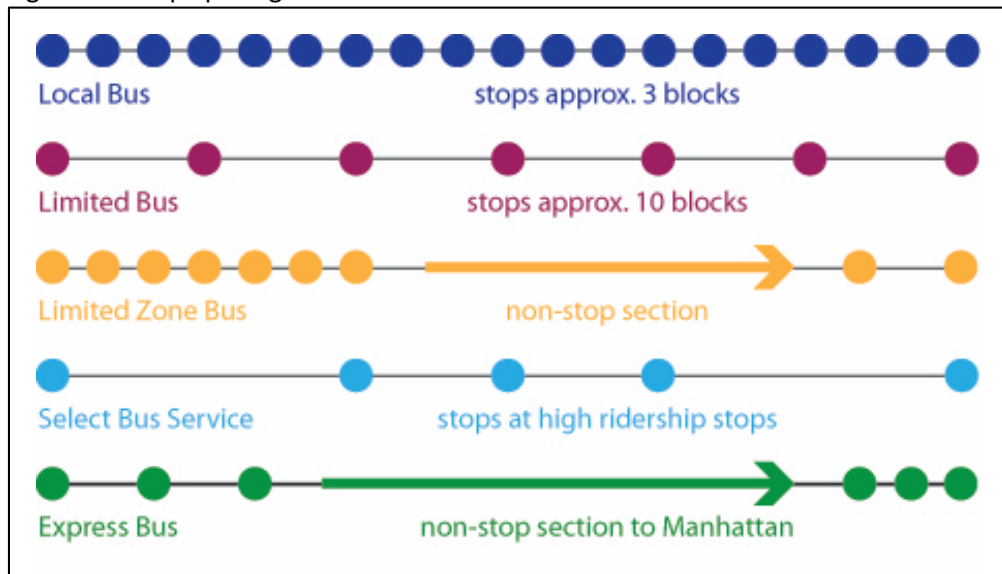
However, many bus routes in Northeast Queens are be considered as subway feeder routes. There is a subgroup of customers who are solely travelling from the outer portions of the route directly to the subway. These customers from the outer “zones” typically have long travel times to their subway connection.

“Limited Zone” service combines features of limited and express service. Buses make limited stops along the outer parts of the route and then operate non-stop to terminals near subway stations. This pattern of service is not currently provided by the MTA. If the number of customers destined for the subway on a particular route reaches a full load at the outer zone of the route, it may be possible to designate some trips as “limited-zone” trips. These limited-zone trips would bypass subsequent stops and run directly to the subway, and perhaps operate only during the peak hours. A limited-zone service could replace regular limited service if it is determined that a route is a good candidate for this service.

Some Northeast Queens bus routes with existing limited service that could possibly benefit from limited-zone service are the Q17, Q27, Q43, and Q46. On average, Q27 Limited customers travel 4.91 miles on the bus, the longest trip length of all bus routes in the study area. Q46 Limited customers currently have an average trip of 3.71 miles, the third longest of all Northeast Queens bus routes.

The MTA will conduct a detailed analysis of ridership patterns under the “Limited-Zone” concept to see the impacts on ridership and travel time savings. The type of service recommended for each of these routes will depend on the number of customers benefitting from each option and the operating costs associated with them.

Figure 27. Stop Spacing Service Patterns



Limited Service

Limited stop bus service has fewer stops than local service and provides a quicker trip for most bus customers along a route.

Q88 (NYC Transit)

The Q88 averages 11,000 weekday customers. The Q88 is also one of the longest bus routes in Northeast Queens. While the Q88 average morning and evening headways meet the guidelines for limited service, additional analysis of ridership is necessary to identify potential limited-stop locations and the percentage of total Q88 customers that would be served by these stops. NYCT will conduct a full analysis of the potential to implement limited-stop service on the Q88 during the next year.

Q12 (NYC Transit)

The Q12 is one of busiest routes in Northeast Queens that does not have limited-stop service. Almost 11,000 customers use the bus on weekdays. While the Q12 average morning and evening headways meet the guidelines for limited-stop service, additional analysis of ridership patterns is necessary to identify potential limited-stop locations and the percentage of total Q12 customers that would be served by these stops. NYCT will conduct a full analysis of the potential to implement limited-stop service on the Q12 during the next year.

North-South Bus Service

Over the course of this study, the MTA identified areas in Northeast Queens that have gaps in north-south bus service. We also received public input asking for additional bus service along north-south corridors. While the western section of the study area can be traversed by the Q20, Q25, Q34, Q44, and Q65, the only bus routes providing full north-south service in the central and eastern sections of Northeast Queens are the Q76 and Q36. The MTA is investigating ways to fill the gaps in service and provide better bus coverage throughout the study area, based on service coverage guidelines.

Select Bus Service

New York City Department of Transportation and the MTA prepared a joint report in 2009 entitled Bus Rapid Transit Phase II: Future Corridors, which presented potential future Select Bus Service routes throughout the city. Under this study, the Flushing to Jamaica corridors of Main Street and Parsons/Kissena Boulevards were identified as good candidates for conversion to SBS. SBS service for these two corridors is currently in the planning stage. Q44 SBS Jamaica-Flushing-Bronx Zoo service is expected to be implemented in late 2015 and Q25 SBS at a later date. There are three additional potential SBS corridors that affect the study area and could impact transit service in Northeast Queens: Union Turnpike, Manhattan-Northern Boulevard-Flushing, and the Hillside Avenue corridors. Planning has not yet begun for these corridors as of the writing of this report, but the studies of these potential SBS corridors will follow soon after the implementation of the two planned SBS routes, as the agencies continue to roll out enhanced transit service throughout the city.

Figure 28. Future BRT Corridors



Downtown Flushing Bus Terminal

Downtown Flushing has the highest volume of intermodal bus-to-rail transfers in North America. The area is a major transportation hub and is extremely congested. An off-street bus terminal in or near Downtown Flushing would greatly improve the customer experience and bus operations. Twenty-two bus routes serve the area and many of these routes terminate in Downtown Flushing. Flushing is an intermodal hub and there are many customers transferring from bus to bus in addition to those transferring from bus to subway in the area. Downtown Flushing has high pedestrian volumes and chronic vehicular congestion. This leads to overcrowded sidewalks and conflicts with vehicles turning through crosswalks. All buses in Flushing board curbside, and bus customers contribute to the volume of pedestrians on sidewalks. Bus shelters cannot easily be accommodated on these sidewalks because they would often exacerbate pedestrian overcrowding by occupying valuable sidewalk space.

Currently, bus routes that terminate in Flushing generate empty buses that are sitting on local streets just waiting to begin the next scheduled trips. This limited curb space is highly valued as delivery vehicles, private automobiles, taxis, and delivery cabs all compete for the same space. New construction in the area reduces the already constrained curbside space, creating congestion, motivating delivery vehicles to occupy bus stops illegally, and causing bus delays by blocking buses from accessing their bus stops. A dedicated bus terminal would allow more convenient bus-to-bus transfers and return curb space to local businesses. The MTA is also exploring route design changes in Downtown Flushing that would decrease the number of bus routes terminating in the area, without affecting service to and from the area.

The greatest challenge to this endeavor is the lack of suitable locations in Downtown Flushing, as most of the available lots are privately owned and already slated for development or redevelopment. A location that is large enough to accommodate a significant number of bus routes and that can bring efficiencies in bus operations has not yet been easily identified. Nevertheless, the MTA will continue to explore ways to pursue a bus terminal by working with our partner agencies to take steps to address this critical need in Downtown Flushing. Location aside, funding for the construction of a terminal will also be a significant challenge to identify. Throughout this process, the support of the public and local elected officials will be highly important in this endeavor.

7. NEXT STEPS

This study analyzed the current state of Northeast Queens bus service and outlines recommendations to improve service. Some of the bus service and schedule changes proposed can be implemented in the short term. Other recommendations require more detailed study and analysis which is anticipated to be completed by the end of the year. The agency will reach out to the public for comments on any proposed actions for implementation. Proposed service improvements will be implemented in the long term if they are determined to improve service, be cost-effective, and reasonably funded.

APPENDIX A – PUBLIC INPUT QUESTIONS AND ANSWERS

New Bus Routes

Q. Can the MTA create an Express Bus from North Shore Towers to Lower Manhattan?

A. The QM6 currently serves North Shore Towers with service to Midtown Manhattan. Several areas in Northeast Queens are served by express buses to either Midtown or Lower Manhattan. Suggestions were made that North Shore Towers could be better served with an express bus service to Lower Manhattan. The MTA evaluated the suggested new route. While the route would add convenience for some customers, the overall performance of this route would not be within operating guidelines, as an insufficient market exists for this service to justify the creation of the route.

Q. Can the MTA create an express bus from Bay Terrace to Lower Manhattan?

A. The QM2 and QM20 currently serve Bay Terrace with service to Midtown Manhattan. Several areas in Northeast Queens are served by express buses to either Midtown or Lower Manhattan. Suggestions were made that Bay Terrace could be better served with an express bus service to Lower Manhattan. The MTA Bus Company has previously studied the possibility of establishing a route to operate between Bay Terrace and Lower Manhattan. While such a route may be feasible at some point in the future, additional funding will need to be found in order to establish this route.

Q. Can the MTA create an express Bus route along Horace Harding Parkway? Parallel east-west streets such as Northern Boulevard, Union Turnpike, and Hillside Avenue have express bus routes.

A. Much of the design of new bus routes involves looking at areas covered by existing bus routes so as not to duplicate services unnecessarily, taking existing passengers away from one bus and providing them a newer bus route. Though an express bus does not run along Horace Harding Parkway, much of the area is served by express buses. The QM4 express bus terminates near Horace Harding Expressway on 164th Street. The QM1 and QM7 express buses terminate near Horace Harding Expressway on 188th Street. The QM5 and QM8 express buses run along Horace Harding Expressway from Springfield Boulevard to Little Neck Parkway.

Q. Can the MTA create an express bus from College Point to Manhattan?

A. College Point is singular among Northeast Queens neighborhoods in that it does not have any express bus service. Many residents of College Point take local or limited buses to Flushing and transfer to the 7 train. While it is not possible to serve every street with express bus service, the MTA looks for concentrations of commuters that would provide solid ridership for an express route. The MTA also looks for travel paths along the street grid that would enable smooth, reliable running of buses. Thus far, no travel path and set of stops has been found that would provide high enough ridership to justify the cost of an express bus in College Point. The MTA will continue to examine new possible routes as demographics shift and redevelopment continues.

Q. Can the MTA create an express bus from Northeast Queens to Long Island City?

A. While the MTA continues to evaluate and adjust the formerly Manhattan-centric focus of express bus routes, local and limited bus routes provide better intraborough and interborough service. While not all origin-destination pairings suggested will have a bus route established to serve them, the MTA will continue to find the best way to balance all forms of public transportation.

Q. Can the MTA create a new North-South route along Springfield Boulevard and Bell Boulevard?

A. While there is existing bus service on both of these streets, there is not a single route that covers the entire length of either boulevard. This study did identify some gaps in North-South service in Northeast Queens. The MTA is investigating ways to fill these gaps in service and provide better bus coverage throughout the study area. The Springfield/Bell Boulevards corridor will be analyzed as part of those efforts.

Q. Can the MTA create a new North-South route along Douglaston Parkway?

A. Douglaston Parkway is bordered by the Cross-Island Parkway, Alley Pond Park, and Douglaston Golf Course in several sections. Due to this, the majority of development is located to the east of Douglaston Parkway. The MTA is investigating ways to fill the gaps in north-south service and provide better bus coverage throughout the study area. This corridor will be analyzed further as part of those efforts.

Route Extensions + Adjustments

Route Adjustments

Q. Can the travel path for Q65 near Flushing Hospital be changed?

A. Comments were received regarding the travel path of the Q65 bus in the area of Flushing Hospital, a Jewish community center, and a Hindu temple. The MTA evaluated the suggested changes to the route travel path. Further information on this specific service change is located in Section 6: Recommendations of this document.

Q. Can the MTA move the Q15A off of 10th Avenue?

A. As part of the 2010 Service Reductions, the Q14 was discontinued and the Q15 was split into the Q15 and Q15A. The Q15A serves areas previously served by the discontinued Q14 bus route, including 150th Street and 7th Avenue. To travel from Clintonville Street to 154th Street, the Q15A uses 10th Avenue. NYCT operates buses on many residential streets throughout New York City. 10th Avenue is wide enough to accommodate the Q15A.

Q: Can the MTA keep the Q27 on the current detour that it's on, since it's getting me to my destination faster?

A: The Q27 is on temporary detour until 2017 due to construction on 216th Street. We will continue to monitor the route's performance and impacts along the route. Currently, there are no plans to make this temporary reroute permanent.

Q. Can the MTA extend the Q34 to Francis Lewis Boulevard?

A. Currently, the Q34 ends on Willets Point Boulevard at 149th Street. The community has suggested that a local bus service running along Willets Point Boulevard to Francis Lewis Boulevard would allow for additional transfers to the Q76 route. No local bus service is currently available on Willets Point Boulevard between this location and Francis Lewis Boulevard. The MTA evaluated the suggested extension to the route. The MTA believes that a route extension to Francis Lewis Boulevard would add reasonable local bus service coverage along Willets Point Boulevard (a corridor now only served by weekday express service, the QM20), but the number of additional riders and possible transfers that

might be established is difficult to quantify, and the MTA does not currently have the funding or resources needed to implement this extension.

Q. Can the MTA extend the Q46 to North Shore Towers?

A. The Q46 is a long route and operates almost the entire length of Union Turnpike from Queens to Nassau County. Extending the route to North Shore Towers would require an extension of approximately one mile in each direction on either branch. This would add almost two miles to each trip. Long Island Jewish Hospital is a large trip generator and has a dedicated bus terminal area near the main hospital entrance. We have also receive significant amounts of comments over the years in opposition to a possible Q46 extension to North Shore Towers.

Bus Stop Changes

Q. Can the MTA improve the conditions at bus stops at subway stations, particularly 169th Street Subway Station?

A. The MTA will continue to evaluate the passenger environment and look for ways to improve the customer's experience through better information, more comfortable surroundings, and an increased feeling of safety. Unfortunately, many of the conditions of the sidewalk along Hillside Avenue are due to the high number of buses running along the street during the evening rush hour. Buses arrive, discharge passengers, and load up new passengers. The dwell time for fare collection of so many transfers from the subway slows down the departure of the bus and therefore prohibits other buses from properly curbing to pick up passengers. The MTA continues to deploy new technologies to aid in the mitigation of these issues. BusTime, which provides information for passengers based on the GPS location of the bus, also provides essential information to MTA operations staff so that they can better adjust the timing and distribution of buses along the route. The system is new, and the MTA is just beginning to make changes that will ensure a better experience for all of our passengers.

Other Bus Service Requests

Q: The bus route on my street is local, but can it be turned into a limited?

A: The guidelines for limited service are listed in Section 5: Public Input of this document.

Q. Can the MTA make information clear regarding the numbering of bus routes?

A. The MTA currently has 315 bus routes, by far the largest number in the United States. Almost a third of this number, consisting of 81 local and limited routes and 22 express routes, operate primarily in Queens. The sheer number of bus routes makes adding extra numbers problematic for customer understanding.

Q. What is Bus Time and how does it work?

A. Additional information about BusTime is located in Section 4: Quality of Service in this report. Also, please visit http://web.mta.info/nyct/MTA_BusTime.htm for more information and instructions on how to use its features.

Bus Stop Requests

Q: A limited bus bypasses my stop, which is only served by the local bus. Can I the limited stop at my bus stop as well?

A: Limited routes are able to move more rapidly along their travel paths than local buses precisely because they limit the number of stops that the bus makes. Stopping to pick up passengers over short distances is one of the factors leading to slow buses and reduced reliability. Therefore a balance must be struck between stop spacing and bus speed. Limited stop spacing is determined by ridership. Adding more stops to a limited route would cause the limited to act like a local and lose its value as a rapid bus line.

Other Bus Related Requests

Q: Can the ticket vending machines used for Select Bus Service (SBS) also be made vend MetroCards as well?

A: One of the advantages to SBS is faster boarding because of off-board fare collection. These machines are dedicated to passengers boarding SBS buses. SBS would be slowed if passengers were held up from paying their fare due to other customers using the machines to buy or refill MetroCards.

APPENDIX B: ROUTE PROFILES

Local/Limited Bus Routes

Q1 Springfield Boulevard/Braddock/Hillside Avenues
Q12 Sanford Avenue/Northern Boulevard
Q13 Northern/Bell Boulevards
Q15 150th Street
Q15A 150th Street/10th Avenue
Q16 Bayside Avenue/Willets Point Boulevard
Q17 Kissena Boulevard/Horace Harding Expressway/188th Street
Q19 Astoria Boulevard
Q20A Main/Union Streets/20th Avenue
Q20B Main/Union Streets/14th Avenue
Q25 Kissena Boulevard/127th Street
Q26 46th Avenue/Hollis Court Boulevard
Q27 46th Avenue/Rocky Hill Road/Springfield Boulevard
Q28 Northern Boulevard\32nd Avenue
Q30 Utopia Parkway/Horace Harding Expressway
Q31 Utopia Parkway/Bell Boulevard
Q34 Kissena/Willets Point Boulevards
Q36 Hillside/Jamaica Avenues/Little Neck Parkway
Q43 Hillside Avenue
Q44 Main Street/Cross Bronx Expressway
Q46 Union Turnpike
Q48 Roosevelt Avenue/Ditmars Boulevard/La Guardia Airport
Q50 Co-op City/Flushing
Q58 Fresh Pond Road/Corona Avenue
Q64 Jewel Avenue
Q65 164th Street/College Point Boulevard
Q66 Northern Boulevard
Q76 Francis Lewis Boulevard
Q88 Horace Harding Expressway/73rd Avenue/Springfield Boulevard

Express Bus Routes

QM1 Fresh Meadows/Midtown
QM2 Bay Terrace/Midtown
QM3 Little Neck/Midtown
QM4 Electchester/Midtown
QM5 Glen Oaks/Midtown
QM6 Lake Success/Midtown
QM7 Fresh Meadows/Downtown
QM8 Glen Oaks/Downtown
QM20 Bay Terrace/Midtown via Clearview
X68 Floral Park/Midtown

Q1 - Springfield Blvd/Braddock/Hillside Avenues

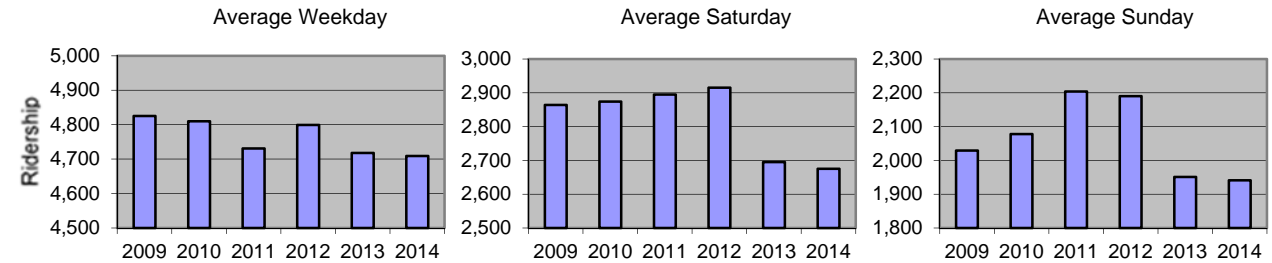
The Q1 operates between 165th Street Bus Terminal, Jamaica and Braddock Avenue/243rd Street, Bellerose or Jamaica Avenue/Springfield Boulevard (Queens Village LIRR station). Late nights, all trips serve both branches.

Neighborhoods Served: Queens Village, Oakland Gardens, Jamaica Estates, and Jamaica.

Service Details and Ridership:

Q1 – Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (in minutes)	Peak: AM - 20/PM - 15 Off-Peak: Noon - 30/Eve - 20 Overnight: 60	Day: 15 Overnight: 60	Day: 18 Overnight: 60
Average Daily Ridership (2014)	4,709	2,675	1,941

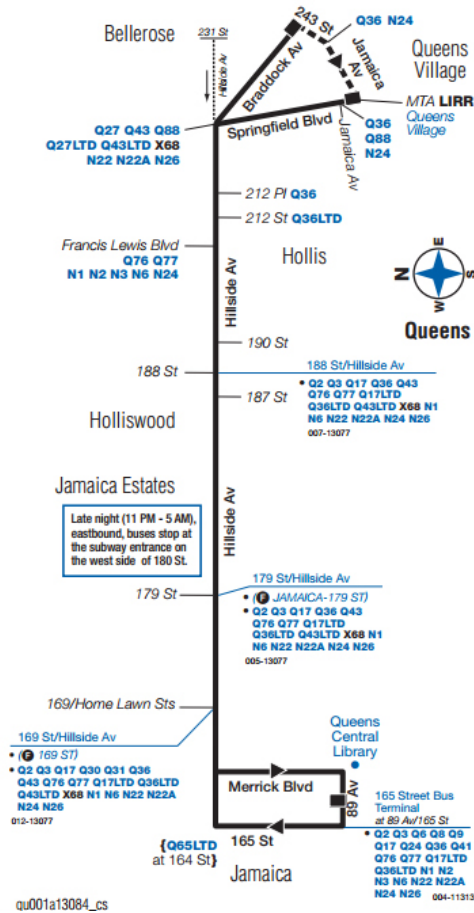
Ridership History: Between 2009 and 2014, there was a 2.4 percent decrease in average weekday ridership, a 6.6 percent decrease in average Saturday ridership, and a 4.3 percent decrease in average Sunday ridership on the route.



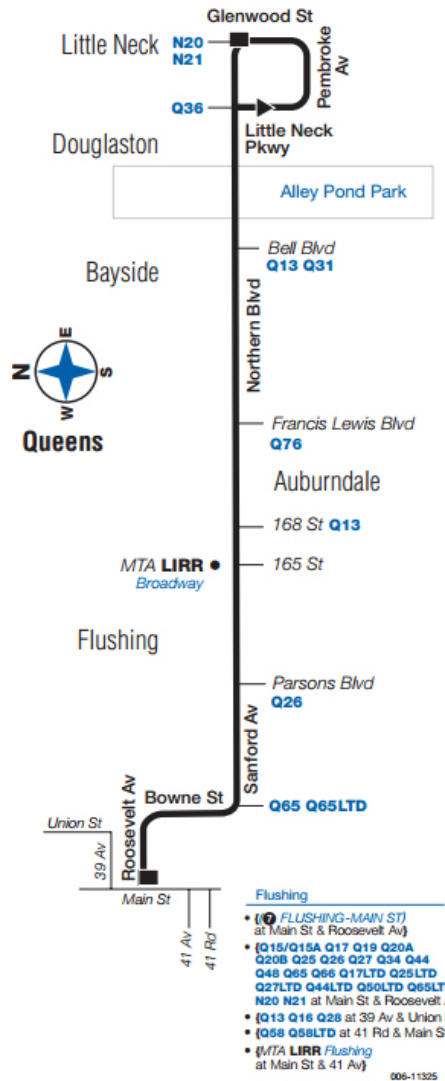
Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q1 - Eastbound	Ons	Offs	Q1 - Westbound	Ons	Offs
Hillside Av & 180 th St	833	114	Hillside Av & 179 th St F Station	44	1,398
Hillside Av & 168 th Pl	659	15	165 th St & 165 th St Terminal	0	464
Hillside Av & Springfield Bl	84	451	Hillside Av & Springfield Bl	342	73
Hillside Av & 182 nd Pl	124	207	Hillside Av & 169 th St	56	149
165 th St & 165 th St Terminal	275	0	Hillside Av & 212 th St	149	21

Transfers: On an average weekday, the most popular Q1 bus to bus transfers were between the Q1 and the Q27 (166), Q43 (148), Q36 (51), Q88 (46), Q77 (45). There were 1,068 transfers between the Q1 and F train at Jamaica-179th Street Station.



Q12 - Sanford Avenue/Northern Boulevard



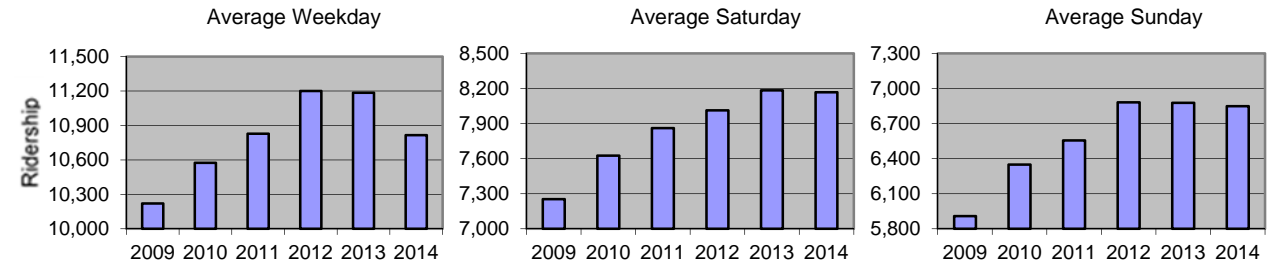
The Q12 operates between the Flushing-Main Street 7 Subway Station, Flushing and Northern Boulevard/Glenwood Street, Little Neck.

Neighborhoods Served: Little Neck, Douglaston, Bayside, Auburndale, and Flushing.

Service Details and Ridership:

Q12 – Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (in minutes)	Peak: AM - 5/PM - 6 Off-Peak: Noon - 10/Eve - 6 Overnight: 60	Day: 10 Overnight: 60	Day: 10 Overnight: 60
Average Daily Ridership (2014)	10,815	8,168	6,848

Ridership History: Between 2009 and 2014, there was a 5.8 percent increase in average weekday ridership, a 12.4 percent increase in average Saturday ridership, and a 16.1 percent increase in average Sunday ridership.



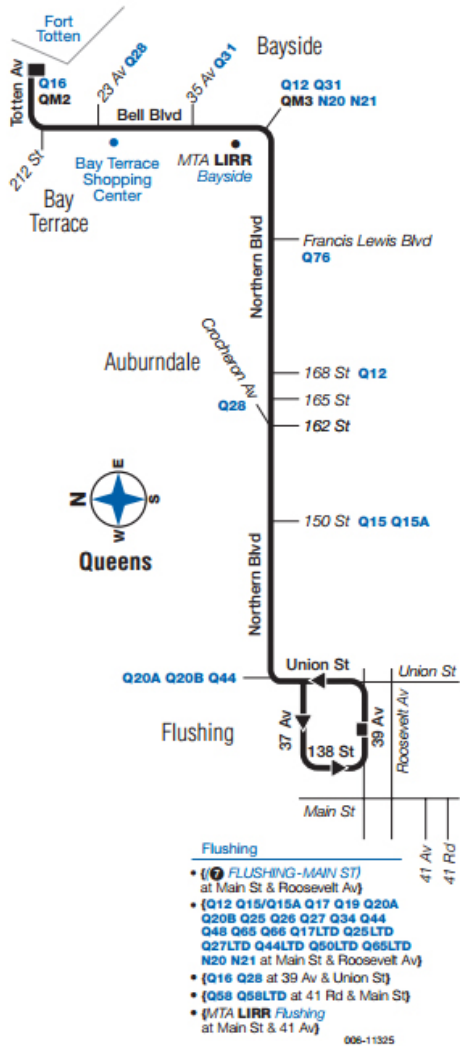
Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q12 - Eastbound	Ons	Offs
Roosevelt Av & Main St	3,888	0
Roosevelt Av & Layover	972	0
Sanford Av & 147 th St	63	445
Sanford Av & 165 th St	102	323
Sanford Av & Parsons Bl	52	343

Q12 - Westbound	Ons	Offs
Roosevelt Avenue & Union St	0	3,122
Roosevelt Avenue & Prince St	0	608
Sanford Avenue & 158 th St	355	34
Northern Bl & Bell Bl	216	142
Sanford Av & 165 th St	274	66

Transfers: On an average weekday, the most popular bus to bus transfers were between the Q12 and the Q13 (211), Q44 (101), Q65 (89), Q58 (78), Q27 (77). There were 2,474 transfers between the Q12 and the 7 train at Flushing-Main Street Station on an average weekday.

Q13 - Northern/Bell Boulevards



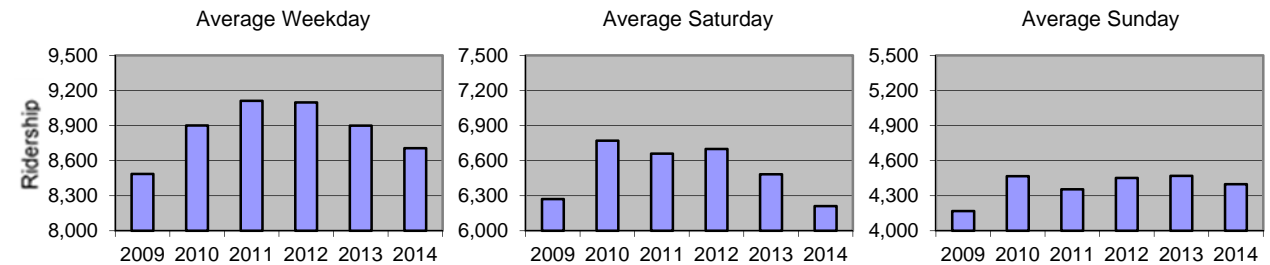
The Q13 operates between the Flushing-Main Street 7 subway station in Flushing and Fort Road/Cross Island Parkway in Fort Totten.

Neighborhoods Served: Bay Terrace, Bayside, Auburndale, and Flushing.

Service Details and Ridership:

Q13 – Service Details	Weekday	Saturday	Sunday
Span	4:40AM – 2:33AM	5:10AM – 2:35AM	5:10AM – 2:35AM
Frequency (in minutes)	Peak: AM - 9/PM - 9 Off-Peak: Noon - 12/Eve - 9 Overnight: N/A	Day: 12 Overnight: N/A	Day: 16 Overnight: N/A
Average Daily Ridership (2014)	8,706	6,211	4,399

Ridership History: Between 2009 and 2014, there was a 2.6 percent increase in average weekday ridership, a 1.1 percent decrease in average Saturday ridership and a 5.6 percent increase in average Sunday ridership.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q13 - Eastbound	Ons	Offs
39 th Av & 138 th St	2,823	0
Northern Bl & Parsons Bl	165	426
Northern Bl & 147 th St	107	203
Bell Bl & 42 nd Av	177	203
Northern Bl & Murray St	67	247

Q13 - Westbound	Ons	Offs
39 th Av & 138 th St	0	2,573
Northern Bl & Parsons Bl	239	132
Bell Bl & 41 st Av	177	183
Northern Bl & 147 th St	235	102
Bell Bl & Northern Bl	226	102

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q13 and the Q28 (214), Q12 (173), Q27 (113), Q31 (104), and Q76 (94). There were 1,663 transfers between the Q13 and the 7 train at Flushing-Main Street Station on an average weekday.

Q15/Q15A - 150 Street

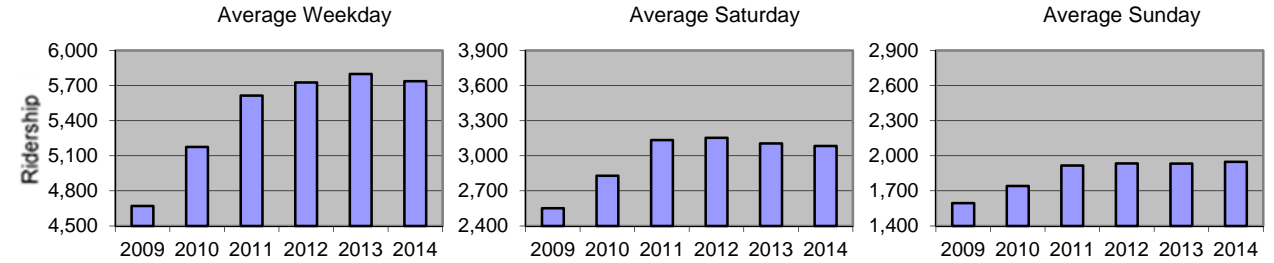
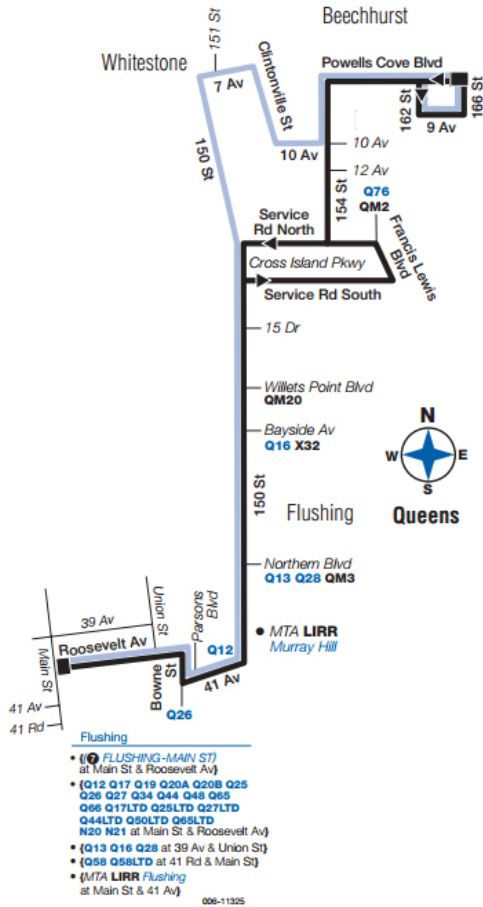
The Q15 operates between the Flushing-Main Street 7 subway station in Flushing and 166th Street/Powell's Cove Boulevard in Beechurst. The Q15A operates between Flushing-Main Street 7 subway station in Flushing and 166th Street/Powell's Cove Boulevard in Beechurst via Whitestone.

Neighborhoods Served: Beechurst, Whitestone and Flushing.

Service Details and Ridership:

Q15/Q15A – Service Details	Weekday	Saturday	Sunday
Span	5:07AM – 12:53AM	4:58AM – 12:55AM	5:57AM – 1:15AM
Frequency (combined headway, in minutes)	Peak: AM - 9/PM - 9 Off-Peak: Noon - 20/Eve - 9 Overnight: N/A	Day: 18 Overnight: N/A	Day: 26 Overnight: N/A
Average Daily Ridership (2014)	5,738	3,084	1,949

Ridership History: Between 2009 and 2014, average weekday ridership increased by 22.9 percent, average Saturday ridership increased by 20.6 percent, and average Sunday ridership increased by 22.3 percent.

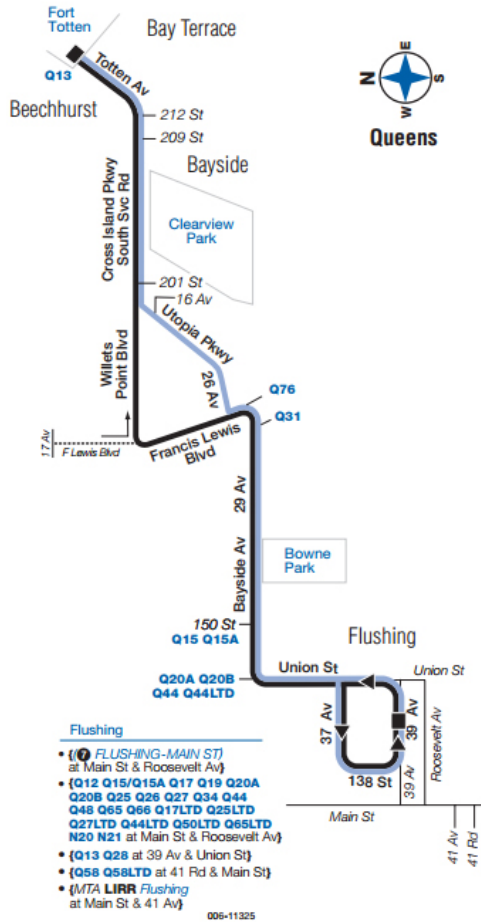


Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q15/Q15A - Northbound	Ons	Offs	Q15/Q15A - Southbound	Ons	Offs
Roosevelt Av & Bowne St	910	130	Roosevelt Av & Union St	23	359
Roosevelt Av & Main St	607	0	41 st Av & Parsons Bl	75	20
41 st Av & Parsons Bl	45	230	Roosevelt Av & Bowne St	43	47
150 th St & Northern Bl	51	145	150 th St Northern Bl	53	36
Cross Island Pky & 150 th St	13	111	150 th St & 17 th Rd	77	5

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q15/Q15A and the Q44 (73), Q25 (52), Q28 (49), Q58 (48), Q76 (44). There were 1,573 transfers between the Q15/Q15A and the 7 train at Flushing-Main Street Station on an average weekday.

Q16 - Bayside Avenue/Willets Point Boulevard



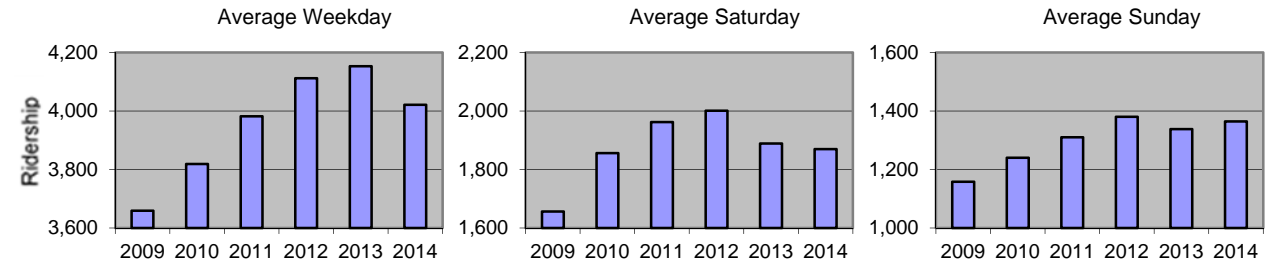
The Q16 operates between the Flushing-Main Street 7 Station in Flushing and Fort Totten. In Whitestone, some Q16 buses operate via 26th Avenue and Utopia Parkway and others operate via Francis Lewis Boulevard and Willets Point Boulevard.

Neighborhoods Served: Bay Terrace, Beechhurst, and Flushing.

Service Details and Ridership:

Q16 – Service Details	Weekday	Saturday	Sunday
Span	4:38AM – 1:08AM	4:45AM – 1:12AM	4:45AM – 1:01AM
Frequency (in minutes)	Peak: AM - 9/PM - 11 Off-Peak: Noon - 20/Eve - 12 Overnight: N/A	Day: 20 Overnight: N/A	Day: 25 Overnight: N/A
Average Daily Ridership (2014)	4,021	1,870	1,364

Ridership History: Between 2009 and 2014, there was a 9.9 percent increase in average weekday ridership, a 12.7 percent increase in average Saturday ridership, and a 17.9 percent increase in average Sunday ridership.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q16 - Eastbound	Ons	Offs
39 th Av & Union St	1,806	0
Union St & 35 th Av	141	342
Union St & Bayside Av	62	155
29 th Av & Francis Lewis Bl	12	151
Francis Lewis Bl & 27 th Av	13	108

Q16 - Westbound	Ons	Offs
39 th Av & Union St	0	2,080
Union St & Northern Bl	103	89
Union St & 35 th Av	98	72
Bayside Av & Union St	113	46
29 th Av & 171 st St	127	20

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q16 and the Q44 (67), Q76 (45), Q20B (39), Q17 (36), and Q66 (30). There were 1,382 transfers between the Q16 and the 7 train at Flushing-Main Street Station on an average weekday.

Q17 - Kissena Boulevard/Horace Harding Expressway/188 Street

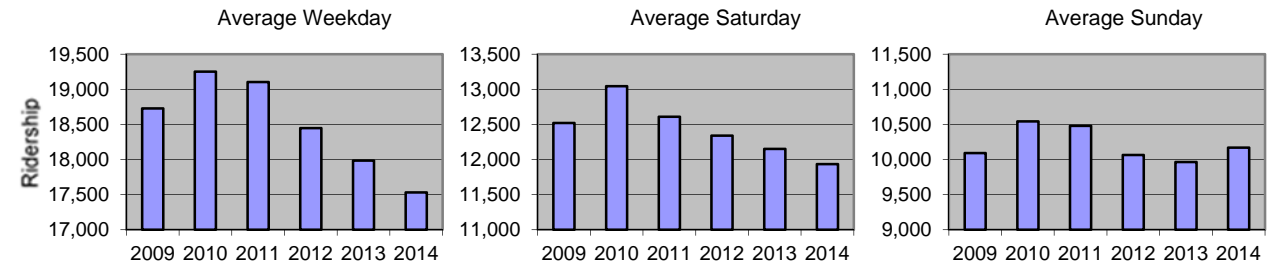
The Q17 operates between the Flushing-Main Street 7 Station in Flushing and Archer Avenue/Merrick Boulevard in Jamaica. Local and limited-stop service are provided on the route.

Neighborhoods Served: Jamaica, Jamaica Estates, Fresh Meadows, and Flushing.

Service Details and Ridership:

Q17 – Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (in minutes)	Peak: AM - 8/PM - 7 Off-Peak: Noon - 6/Eve - 6 Overnight: 40	Day: 7 Overnight: 40	Day: 7 Overnight: 40
Average Daily Ridership (2014)	17,530	11,934	10,170

Ridership History: Between 2009 and 2014, there was a 6.4 percent decrease in average weekday ridership, a 4.8 percent decrease in average Saturday ridership, and a 0.8 percent increase in average Sunday ridership.

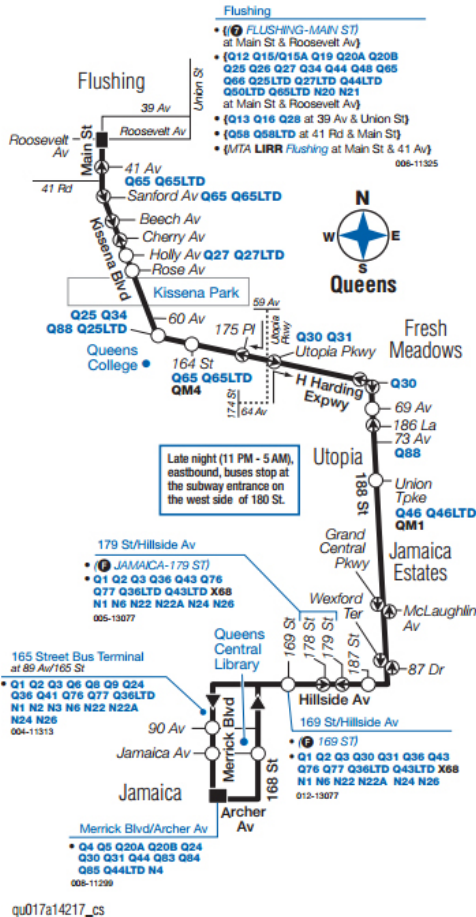


Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q17 - Northbound	Ons	Offs
39 th Av & Main St	0	4,416
188 th St & Horace Harding Exp	682	321
Kissena Bl & Sanford Av	197	707
Horace Harding Exp & 164 th St	529	301
Kissena Bl & Horace Harding Exp	478	261

Q17 - Southbound	Ons	Offs
Kissena Bl & Main St	3,998	266
Main St & Roosevelt Av	2,055	0
Hillside Av & 179 th St Subway	55	1,496
188 th St & Horace Harding Exp	377	869
Kissena Bl & Sanford Av	485	502

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q17 and Q46 (365), Q30 (292), Q25 (275), Q88 (270), and Q65 (250). There were 1,935 transfers between the Q17 and the 7 train at Flushing-Main Street Station and 670 transfers between the Q17 and F train at Jamaica-179th Street Station on an average weekday.



Q19 – Astoria Boulevard



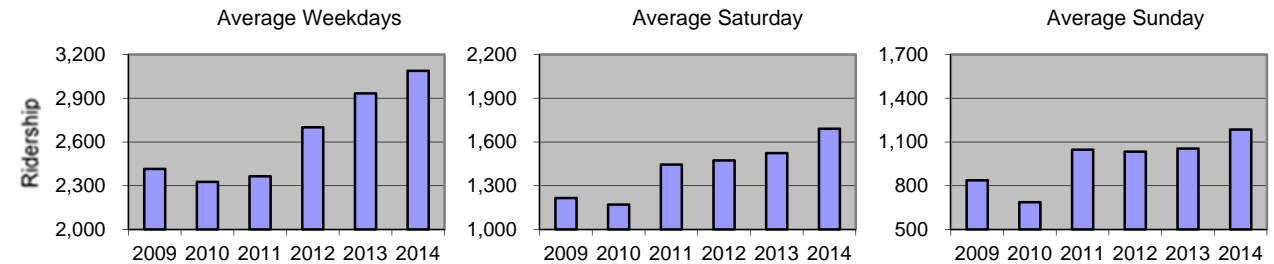
The Q19 operates between Astoria and Flushing via Astoria Boulevard.

Neighborhoods Served: Astoria, East Elmhurst, and Flushing.

Service Details and Ridership:

Q19 – Service Details	Weekday	Saturday	Sunday
Span	5:40AM – 8:00PM	5:50AM – 8:00PM	7:50AM – 8:30PM
Frequency (in minutes)	Peak: AM - 20/PM - 20 Off-Peak: Noon - 20/Eve – N/A Overnight: N/A	Day: 30 Overnight: N/A	Day: 30 Overnight: N/A
Average Daily Ridership (2014)	3,088	1,691	1,185

Ridership History: Between 2009 and 2014, there was a 27.8 percent increase in average weekday ridership, a 39.1 percent increase in average Saturday ridership, and a 41.6 percent increase in average Sunday ridership on the route.



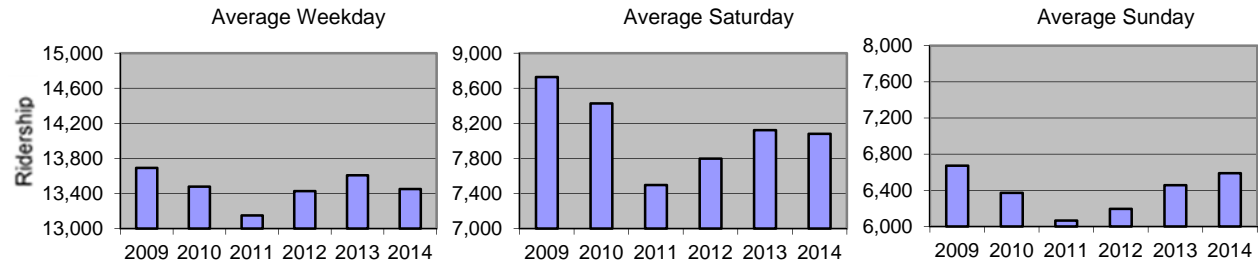
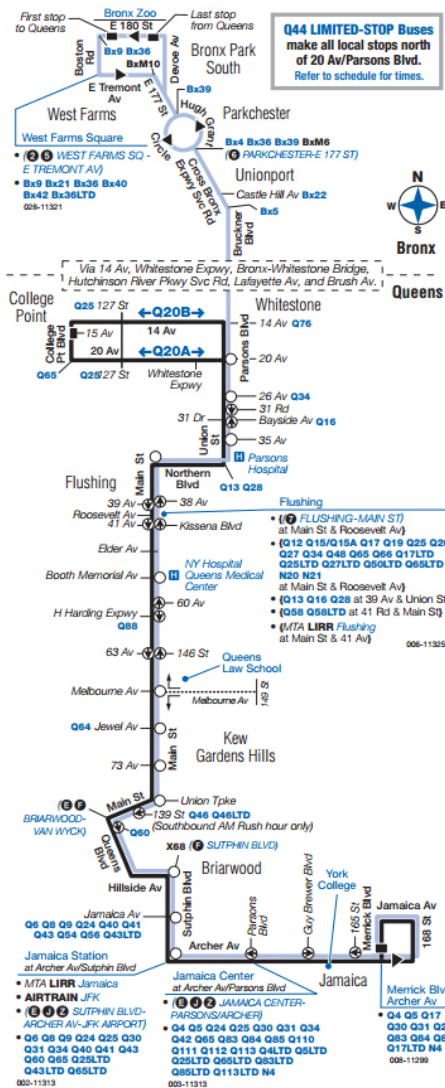
Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q19 - Eastbound	Ons	Offs
39 th Av & Main St	0	748
Astoria Bl & 31 st St	301	196
Northern Bl & Main St	37	190
Astoria Bl & 21 st St	139	13
Astoria Bl & 37 th St	88	39

Q19 - Westbound	Ons	Offs
Hoyt Av & 31 st St	55	538
Roosevelt Av & Main St	528	0
Main St & Northern Bl	279	65
Astoria Bl & 31 st Dr	98	88
Astoria Bl & 82 nd St	67	80

Transfers: On an average weekday, the most popular Q19 bus to bus transfers were between the Q19 and the M60-SBS (134), Q27 (88), Q69 (75), Q44 (70), and Q25 (56). There were 473 transfers between the Q19 and the N and Q trains at Astoria Blvd Station, and 41 transfers between the Q19 and the 7 train at Flushing-Main St Station on an average weekday.

Q20A/Q20B - Main Street/Union Street/20 Avenue or 14 Avenue



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q20A/Q20B - Northbound	Ons	Offs	Q20A/Q20B - Southbound	Ons	Offs
Main St & 39 th Av	550	1,032	Main St & Roosevelt Av	606	692
Main St & 38 th Av	260	170	Main St & 41 st Av	382	215
Main St & Kissena Bl	147	230	Main St & Horace Harding Exp	86	259
Main St & Northern Bl	143	214	Archer Av & Sutphin Bl	44	244
Union St & 26 th Av	35	294	Main St & Union Tpk	97	167

Transfers: On an average weekday, the most popular bus transfers were between the Q20A/B and the Q44 (524), Q46 (221), Q58 (146), Q27 (123), and Q65 (120). There were 1,883 transfers between the Q20A/B and the 7 train at Flushing-Main Street Station and 189 transfers between the Q20A/B and the E, J, and Z trains at Sutphin Boulevard-Archer Avenue-JFK Airport Station.

Q25 - 127th Street/Kissena Boulevard/Parsons Boulevard



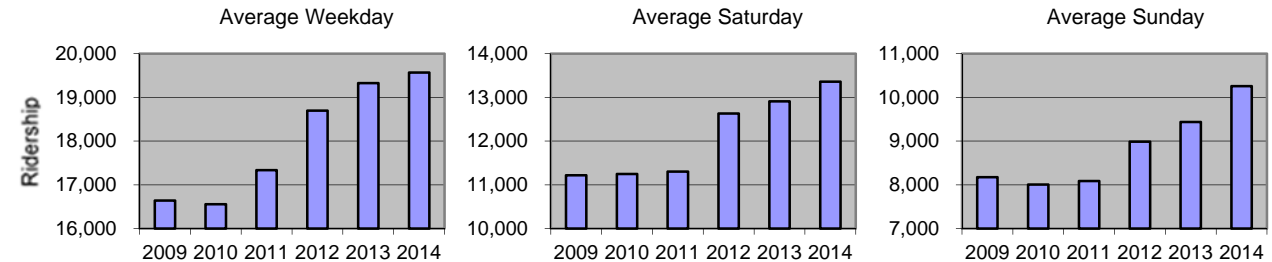
The Q25 operates between Jamaica and College Point. Limited-stop service is provided on the Q25 route. The Q25 travels primarily on Parsons Boulevard, Kissena Boulevard, Linden Place, and 127th Street.

Neighborhoods Served: College Point, Flushing, Kew Gardens Hills, Pomonock, and Jamaica.

Service Details and Ridership:

Q25 – Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (combined Local and Limited during peak hours in peak direction of travel, in minutes)	Peak: AM - 4/PM - 4 Off-Peak: Noon - 12/Eve - 18 Overnight: 60	Day: 12 Overnight: 60	Day: 16 Overnight: 60
Average Daily Ridership (2014)	19,567	13,359	10,255

Ridership History: Between 2009 and 2014, there was a 17.6 percent increase in average weekday ridership, a 19.1 percent increase in average Saturday ridership, and a 25.4 percent increase in average Sunday ridership on the route.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q25 - Northbound	Ons	Offs
Main St & Roosevelt Av	2,372	3,639
Archer Av & Bay H	1,265	48
Kissena Bl & Sanford Av	517	781
Sutphin Bl & 94 th Av	1,225	0
Parsons Bl & 88 th Av	925	252

Q25 - Southbound	Ons	Offs
Main St & 40 th Rd	2,026	2,442
Parsons Bl & Hillside Av	264	1,300
Parsons Bl & Jamaica Av	131	1,414
Jamaica Av & 153 rd St	171	1,219
Kissena Bl & Jewel Av	428	511

Transfers: On an average weekday, the most popular Q25 bus to bus transfers were between the Q25 and the Q34 (278), Q27 (265), Q17 (258), Q65 (206), and Q46 (203). There were 3,447 transfers between the Q25 and the 7 train at Flushing-Main St Station, 452 transfers between the Q25 and the F train at Parsons Blvd Station, and 429 transfers between the Q25 and the E, J, and Z trains at Jamaica Center-Parsons-Archer Station on an average weekday.

Q26 - 46 Avenue/Hollis Court Boulevard

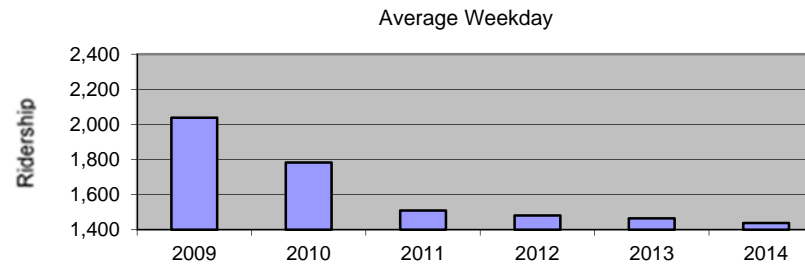
The Q26 operates between the Flushing-Main Street 7 Station in Flushing and Francis Lewis Boulevard/Hollis Court Boulevard in Fresh Meadows on weekdays during peak periods only.

Neighborhoods Served: Fresh Meadows, Auburndale, and Flushing.

Service Details and Ridership:

Q26 – Service Details	Weekday	Saturday	Sunday
Span	5:50AM – 8:53AM/3:17PM – 8:07PM	N/A	N/A
Frequency (in minutes)	Peak: AM - 9/PM - 15 Off-Peak: Noon - N/A / Eve - 24 Overnight: N/A	Day: N/A Overnight: N/A	Day: N/A Overnight: N/A
Average Daily Ridership (2014)	1,438	N/A	N/A

Ridership History: Between 2009 and 2014, there was a 29.4 percent decrease in average weekday ridership on the route.

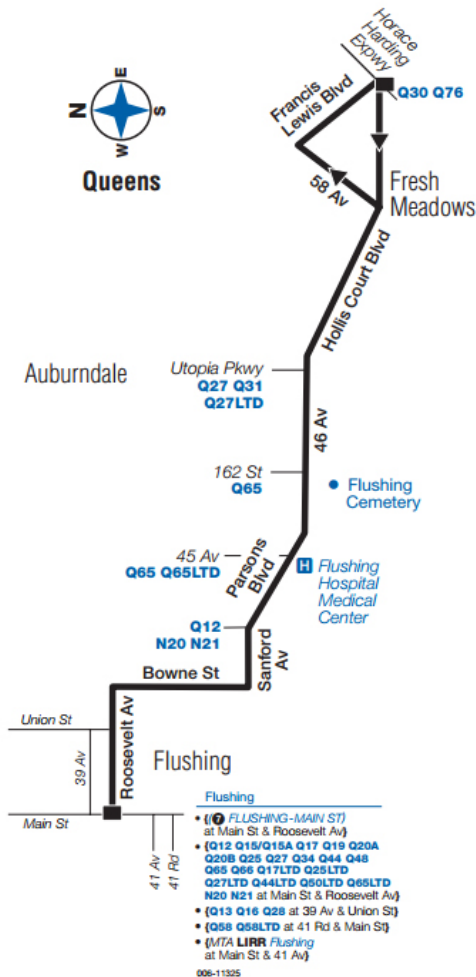


Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q26 - Eastbound	Ons	Offs
Roosevelt Av & Bowne St	408	29
Roosevelt Av & Union St	180	0
Bowne St & 41 st Av	20	84
Francis Lewis Bl & 58 th Av	0	103
Hollis Court Bl & 56 th Av	3	50

Q26 - Westbound	Ons	Offs
Hollis Court Bl & Francis Lewis Bl	113	0
46 th Av & 163 rd St	88	8
Hollis Court Bl & 56 th Av	64	1
Hollis Court Bl & 47 th Av	59	1
Bowne St & Sanford Av	41	13

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q26 and the Q27 (25), Q65 (12), Q44 (8), Q31 (8), and Q25 (8). There were 711 transfers between the Q26 and the 7 train at Flushing-Main Street Station.



Q27 – 46 Avenue/Rocky Hill Road/Springfield Boulevard

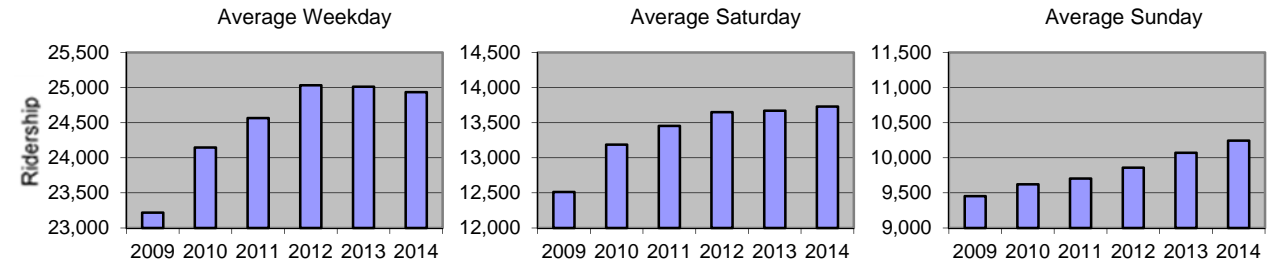
The Q27 operates between the Flushing-Main Street 7 Station in Flushing and Springfield Boulevard/120th Avenue in Cambria Heights. A Q27 Limited-Stop service operates along the route on weekdays during peak hours only.

Neighborhoods Served: Springfield Gardens, Cambria Heights, Queens Village, Oakland Gardens, Auburndale, and Flushing.

Service Details and Ridership:

Q27 – Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (combined Local & Limited during peak/eve hours, in minutes)	Peak: AM - 2/PM - 3 Off-Peak: Noon - 7/Eve - 3 Overnight: 60	Day: 6 Overnight: 60	Day: 8 Overnight: 60
Average Daily Ridership (2014)	24,935	13,731	10,245

Ridership History: Between 2009 and 2014, there was a 7.4 percent increase in average weekday ridership, a 9.7 percent increase in average Saturday ridership, and an 8.5 percent increase in average Sunday ridership.

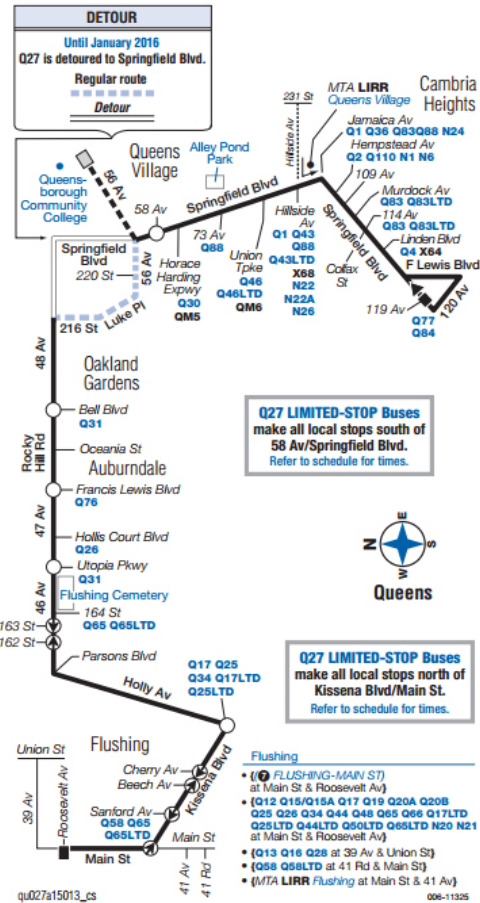


Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q27 - Northbound	Ons	Offs
39 th Av & Main St	0	7,123
Kissena Bl & Sanford A	232	1,341
56 th Av & 223 rd St	814	392
Springfield Bl & Horace Harding Exp N	721	462
Springfield Bl & Union Tpk	535	606

Q27 - Southbound	Ons	Offs
Kisseana Bl & Main St	4,427	283
Main St & 39 th Av	2,851	0
Springfield Bl & 58 th Av	508	798
Springfield Bl & Union Tpk	597	660
Springfield Bl & Hillside Av	262	904

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q27 and the Q46 (894), Q43 (519), Q88 (280), Q25 (276), and Q58 (261). There were 3,801 transfers between the Q27 and the 7 train at Flushing-Main Street Station on an average weekday.



Q28 - Northern Boulevard/32 Avenue

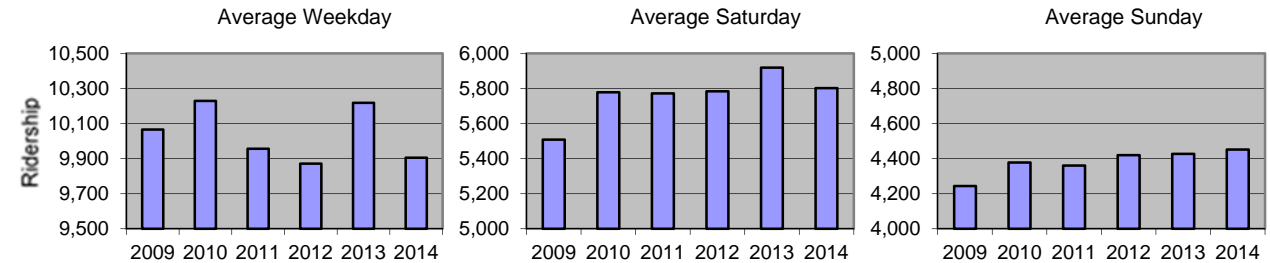
The Q28 operates between the Flushing-Main Street 7 Station in Flushing and Bell Boulevard/23rd Avenue in Bay Terrace.

Neighborhoods Served: Bay Terrace, Auburndale, and Flushing.

Service Details and Ridership:

Q28 – Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (in minutes)	Peak: AM - 5/PM - 8 Off-Peak: Noon - 12/Eve - 8 Overnight: 60	Day: 11 Overnight: 60	Day: 12 Overnight: 60
Average Daily Ridership (2014)	9,905	5,807	4,452

Ridership History: Between 2009 and 2014, there was a 1.6 percent decrease in average weekday ridership, a 5.4 percent increase in average Saturday ridership and a 4.9 percent increase in average Sunday ridership on the route.

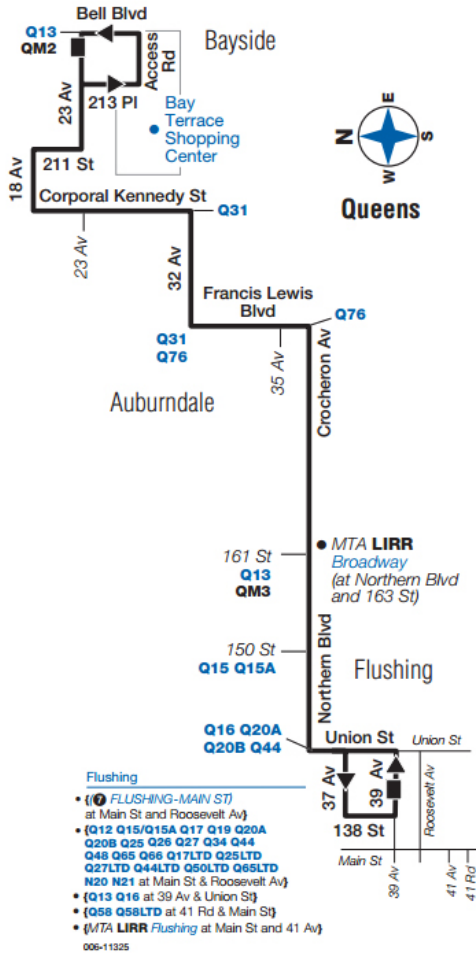


Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q28 - Eastbound	Ons	Offs
39 th Av & 138 th St	3,779	0
Northern Bl & Union St	541	600
Corporal Kennedy St & 32 nd Av	26	508
23 rd Av & Bell Bl	0	298
Francis Lewis Bl & 34 th Av	51	219

Q28 - Westbound	Ons	Offs
39 th Av & 139 th St	0	4,670
Corporal Kennedy St & 32 nd Av	625	25
Union St & Northern Bl	236	356
Northern Bl & 150 th St	213	82
Northern Bl & 147 th St	240	49

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q28 and the Q13 (229), Q25 (126), Q44 (124), Q76 (119), and Q65 (115). There were 2,480 transfers between the Q28 and the 7 train at Flushing-Main Street 7 Station on an average weekday.



Q30 - Utopia Parkway/Horace Harding Expressway

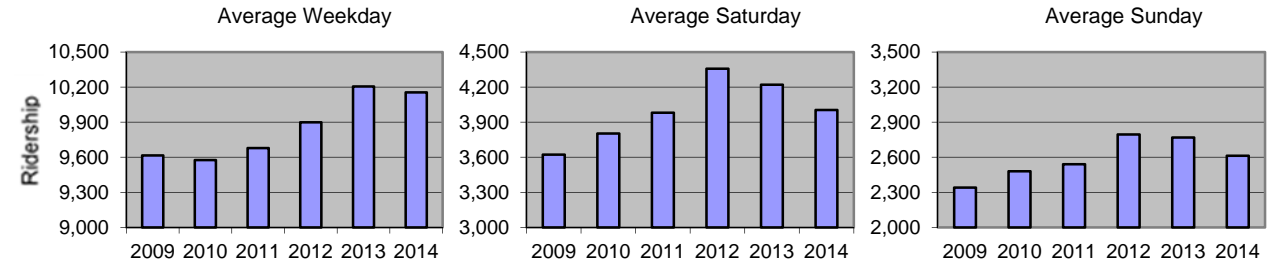
The Q30 operates between Sutphin Boulevard/Archer Avenue in Jamaica and Horace Harding Expressway/Little Neck Parkway in Little Neck. Select trips on weekdays during peak, noon and evening hours operate between Jamaica LIRR Station and Queensborough Community College only.

Neighborhoods Served: Little Neck, Fresh Meadows, Utopia, Hillcrest, Jamaica Estates and Jamaica.

Service Details and Ridership:

Q30 – Service Details	Weekday	Saturday	Sunday
Span	4:54AM – 12:30AM	4:56AM – 12:30AM	4:56AM – 12:30AM
Frequency (in minutes)	Peak: AM - 15/PM - 16 Off-Peak: Noon - 16/Eve - 12 Overnight: N/A	Day: 16 Overnight: N/A	Day: 20 Overnight: N/A
Average Daily Ridership (2014)	10,155	4,004	2,613

Ridership History: Between 2009 and 2014, there was a 5.6 percent increase in average weekday ridership, a 10.4 percent increase in average Saturday ridership and an 11.9 percent increase in average Sunday ridership.

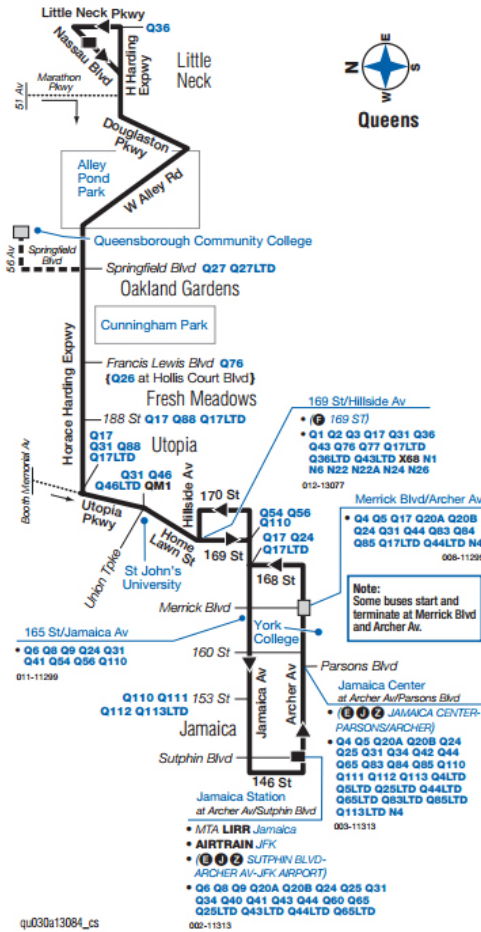


Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q30 - Eastbound	Ons	Offs
Archer Av & Sutphin Bl	1,700	0
Hillside Av & Homelawn St	1,042	268
56 th Av & 223 rd St	0	747
Horace Harding Exp & Springfield Bl	209	509
Archer Av & 158 th St	563	140

Q30 - Westbound	Ons	Offs
169 th St & Hillside Av	189	1,522
Jamaica Av & Parsons Bl	62	1,338
Horace Harding Exp & Springfield Bl	702	163
56 th Av & 223 rd St	832	0
Archer Av & Sutphin Pl	0	625

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q30 and the Q17 (282), Q88 (282), Q27 (281), Q46 (239), and Q111 (129). There were 1,028 transfers between the Q30 and the 7 train at Flushing-Main Street Station and 499 daily transfers between the Q30 and the E, J, and Z trains at Sutphin Boulevard-Archer Avenue-JFK Airport Station.



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Q31 - Utopia Parkway/Bell Boulevard

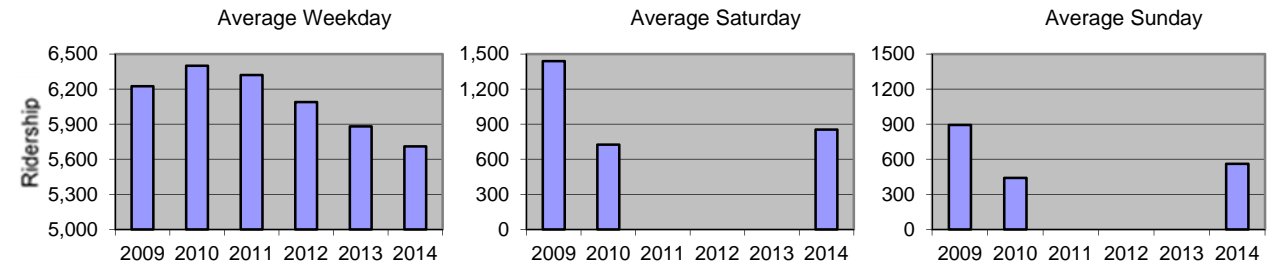
The Q31 operates between Sutphin Boulevard/Archer Avenue in Jamaica and 27th Avenue/Francis Lewis Boulevard in Bayside. Weekend service on the route was discontinued in June 2010 and restored in April 2014.

Neighborhoods Served: Jamaica, Jamaica Estates, Hillcrest, Utopia, Auburndale, and Bayside.

Service Details and Ridership:

Q31 – Service Details	Weekday	Saturday	Sunday
Span	5:40AM – 11:35PM	8:20AM – 8:00PM	9:10AM – 7:30PM
Frequency (in minutes)	Peak: AM - 6/PM - 13 Off-Peak: Noon - 20/Eve - 20 Overnight: N/A	Day: 35 Overnight: N/A	Day: 35 Overnight: N/A
Average Daily Ridership (2014)	5,709	1,150	756

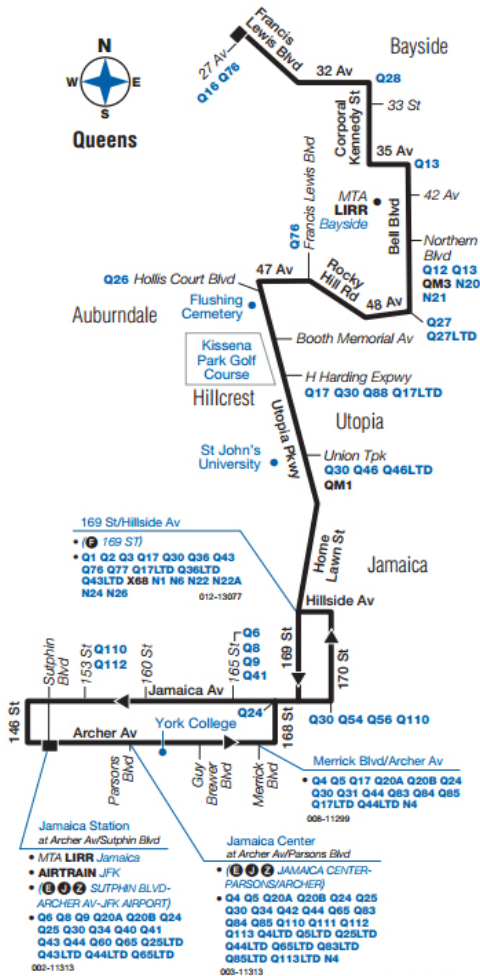
Ridership History: Between 2009 and 2014, there was an 8.3 percent decrease in average weekday ridership, a 20.1 percent decrease in average Saturday ridership and a 15.5 percent decrease in average Sunday ridership on the route. (Note: Average Saturday and Sunday ridership for 2014 only includes average for dates after 4/16/2014.)



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q31 - Northbound	Ons	Offs	Q31 - Southbound	Ons	Offs
Hillside Av & Homelawn St	492	171	169 th St & Hillside Av	110	678
Archer Av & Sutphin Bl	619	0	Jamaica Av & Parsons Bl	29	637
Utopia Pky & Horace Harding Exp	224	230	Utopia Pky & Horace Harding Exp	174	207
Utopia Pky & Union St	160	156	Archer Av & Sutphin Bl	0	351
Archer Av & 158 th St	246	58	Utopia Pky & Union Tpk	123	144

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q31 and the Q27 (323), Q46 (176), Q13 (139), Q31 (116), and Q12 (95). There were 403 transfers between the Q31 and the F train at 169th Street Station and 166 transfers between the Q31 and the E, J, and Z trains at Jamaica Center-Parsons-Archer Station on an average weekday.



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Q34 - Willets Point Blvd/Kissena Blvd/Parsons Blvd



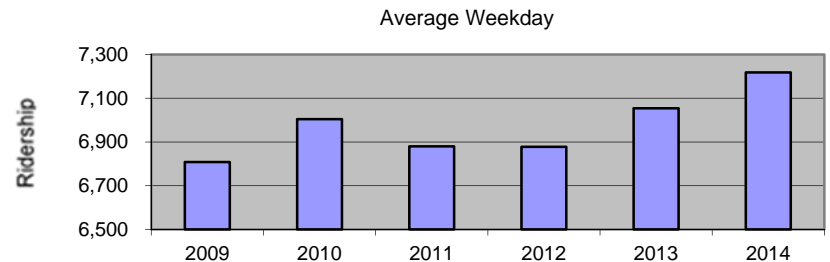
The Q34 operates between Jamaica and Whitestone primarily via Parsons Boulevard, Kissena Boulevard, and Willets Point Boulevard. The route operates on weekdays only.

Neighborhoods Served: Whitestone, Flushing, and Jamaica.

Service Details and Ridership:

Q34 – Service Details	Weekday	Saturday	Sunday
Span	5:28AM – 9:17PM	N/A	N/A
Frequency (in minutes)	Peak: AM - 10/PM - 10 Off-Peak: Noon - 12/Eve - 15 Overnight: N/A	Day: N/A Overnight: N/A	Day: N/A Overnight: N/A
Average Daily Ridership (2014)	7,218	N/A	N/A

Ridership History: Between 2009 and 2014, there was a 6.0 percent increase in average weekday ridership on the route.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q34 - Northbound	Ons	Offs
Main St & Roosevelt Av	753	1,324
Main St & Northern Bl	207	371
Union St & 26 th Av	43	419
Kissena Bl & Sanford Av	109	310
Sutphin Bl & 94 th St	409	0

Q34 - Southbound	Ons	Offs
Main St & 40 th Rd	633	1,022
Parsons Bl & Jamaica Av	52	485
Parsons Bl & Hillside Av	80	442
Jamaica Av & 153 rd St	73	428
Main St & Northern Bl	303	79

Transfers: On an average weekday, the most popular Q34 bus to bus transfers were between the Q34 and the Q25 (269), Q17 (114), Q27 (103), Q46 (79), Q65 (73). There were 1,252 transfers between the Q34 and the 7 train at Flushing-Main St Station, 163 transfers between the Q34 and the F train at Parsons Blvd Station, and 141 transfers between the Q34 and E, J, and Z trains at Jamaica Center-Parsons-Archer Station on an average weekday.

Q36 - Hillside/Jamaica Avenues

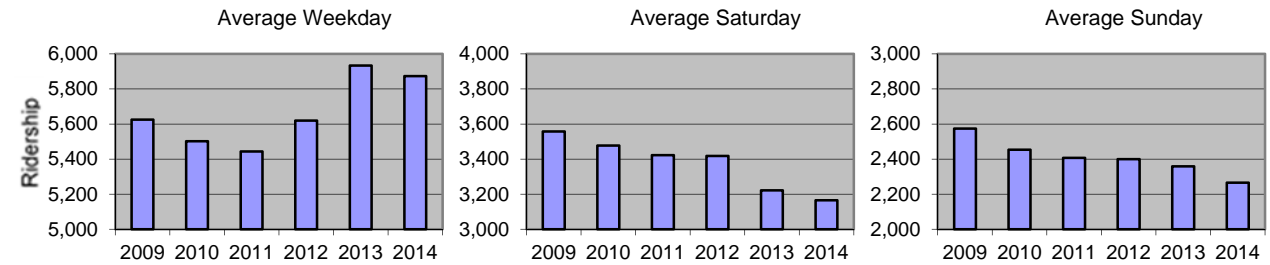
The Q36 operates between the 165th Street Bus Terminal in Jamaica and Jamaica Avenue/257th Street in Floral Park or the Little Neck Station LIRR Station. Limited-stop service is provided on weekdays during peak hours only between the 165th Street Bus Terminal in Jamaica and Jamaica Avenue/257th Street in Floral Park.

Neighborhoods Served: Floral Park, Queens Village, Jamaica Estates, and Jamaica.

Service Details and Ridership:

Q36 – Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (combined Local & Limited during peak hours, in minutes)	Peak: AM - 5/PM - 5 Off-Peak: Noon - 17/Eve - 12 Overnight: 60	Day: 16 Overnight: 60	Day: 21 Overnight: 60
Average Daily Ridership (2014)	5,874	3,166	2,266

Ridership History: Between 2009 and 2014, there was a 4.4 percent increase in average weekday ridership, an 11.0 percent decrease in average Saturday ridership and an 11.9 percent decrease in average Sunday ridership on the route.

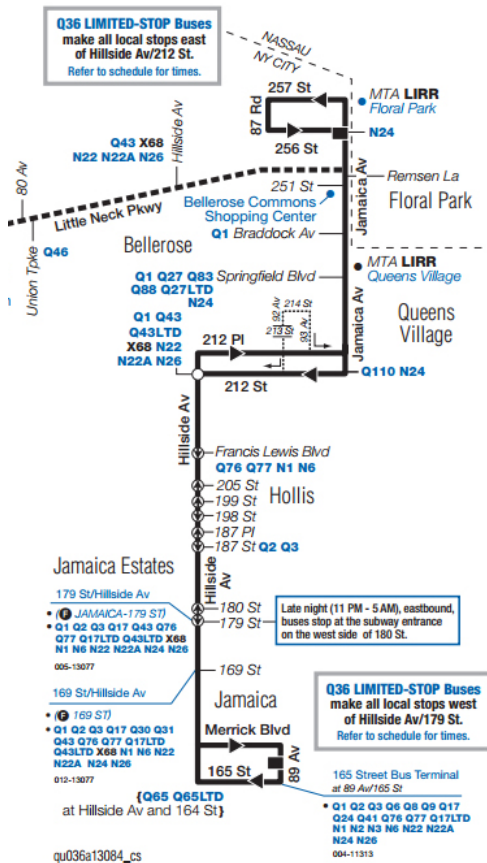


Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q36 - Eastbound	Ons	Offs
Hillside Av & 180th St	790	113
Hillside Av & 168th Pl	824	22
165 th St Terminal & 165 th St Terminal, Bay 6	403	0
Hillside Av & 187 th Pl	171	162
Hillside Av 212 th St	40	287

Q36 - Westbound	Ons	Offs
Hillside Av & 179th St F Station	43	1,865
165 th St & 165 th St Terminal	0	547
Jamaica Av & Springfield Bl	251	87
Hillside Av & 212 th St	210	38
Jamaica Av & 212 th Pl	188	58

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q36 and the Q27 (100), Q43 (98), Q110 (64), Q1 (54), and Q17 (48). There were 1,431 transfers between the Q36 and the F train at Jamaica-179th Street Station on an average weekday.



Q43 - Hillside Avenue

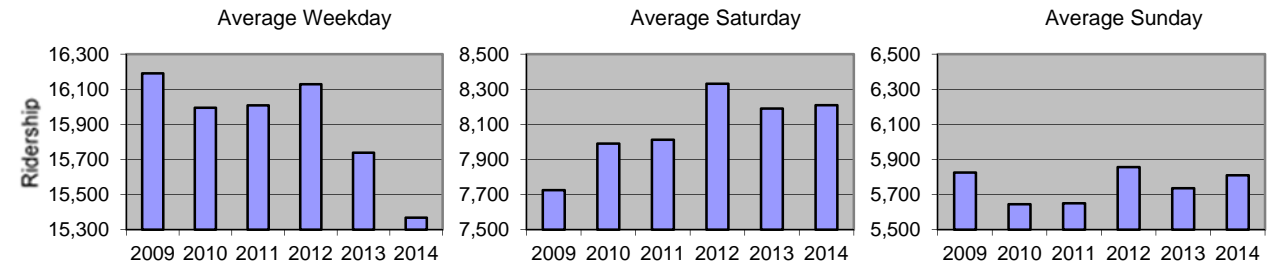
The Q43 operates between the Supthin Boulevard-Archer Avenue E, J and Z Station and the LIRR Jamaica Station in Jamaica and Hillside Avenue/268th Street in Floral Park. Limited-stop service is provided along the route on weekdays during peak and evening hours.

Neighborhoods Served: Floral Park, Queens Village, Jamaica Estates, Jamaica, and Kew Gardens.

Service Details and Ridership:

Q43 – Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (combined Local & Limited during peak and evening hours, in minutes)	Peak: AM - 2/PM - 3 Off-Peak: Noon - 8/Eve - 4 Overnight: 48	Day: 11 Overnight: 48	Day: 14 Overnight: 48
Average Daily Ridership (2014)	15,368	8,209	5,810

Ridership History: Between 2009 and 2014, there was a 5.1 percent decrease in average weekday ridership, a 6.3 percent increase in average Saturday ridership, and a 0.3 percent decrease in average Sunday ridership on the route.

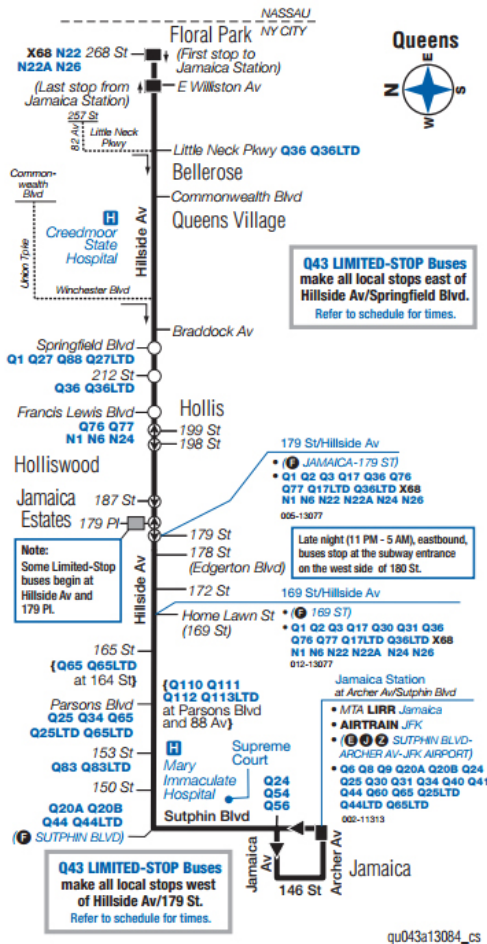


Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q43 - Eastbound	Ons	Offs
Hillside Av & 179 th Pl	1,372	305
Archer Av & Sutphin Bl	1,295	0
Hillside Av & Parsons Bl	734	277
Hillside Av & Springfield Bl	337	576
Hillside Av & 231 st St	98	750

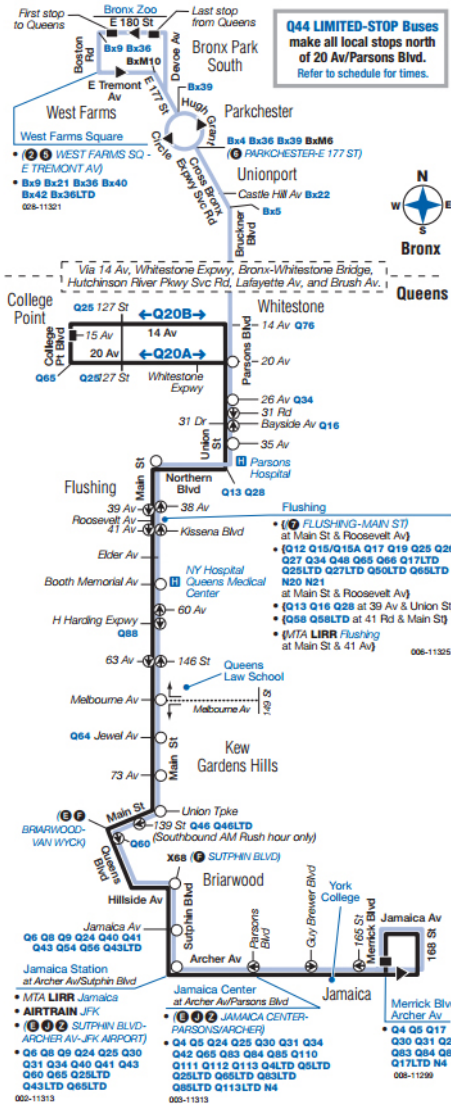
Q43 - Westbound	Ons	Offs
Hillside Av & 179 th St Subway	316	1,113
Sutphin Bl & Jamaica Av	0	889
Hillside Av & Springfield Bl	621	201
Hillside Av & Parsons Av	105	499
Hillside Av & Francis Lewis Bl	330	234

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q43 and the Q27 (453), Q111 (190), Q1 (184), Q77 (156), and the Q65 (153). There were 2,545 transfers between the Q43 and the F train at Jamaica-179th Street Station.



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Q44 - Main Street/Cross Bronx Service Road/Limited



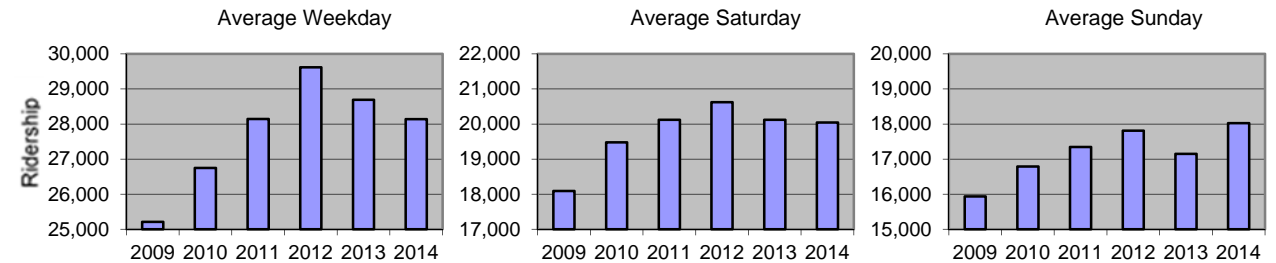
The Q44 Limited operates between Archer Avenue/Merrick Boulevard in Jamaica and Devoe Avenue/East 180th Street, Bronx Zoo in West Farms, Bronx. During late night and early morning periods, the Q44 makes all local stops between Jamaica and the Bronx. At other times, the Q44 makes only limited stops in Queens.

Neighborhoods Served: Jamaica, Kew Gardens, Kew Gardens Hills, Flushing, Whitestone, Unionport, Parkchester, and West Farms.

Service Details and Ridership:

Q44 – Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (in minutes)	Peak: AM - 4/PM - 5 Off-Peak: Noon - 8/Eve - 6 Overnight: 30	Day: 7 Overnight: 30	Day: 8 Overnight: 30
Average Daily Ridership (2014)	28,139	20,044	18,024

Ridership History: Between 2009 and 2014, there was an 11.6 percent increase in average weekday ridership, a 10.7 percent increase in average Saturday ridership and a 13.2 percent increase in average Sunday ridership.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q44 - Northbound	Ons	Offs	Q44 - Southbound	Ons	Offs
Main St & 39 th St	1,531	3,409	Main St & Roosevelt Av	2,260	2,322
Hugh Grant Cir & Metropolitan Av	357	1,748	Westchester Av & Virginia Av	1,691	340
Archer Av & Sutphin Bl	1,361	86	Main St & 41 st Av	1,171	800
Main St & Kissena Bl	533	893	E Tremont Av & Boston Rd	1,344	35
Main St & 38 th Av	971	428	Main St & Horace Harding Exp N	328	959

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q44 and the Q20B (639), Q46 (350), Bx9 (314), Bx36 (277), and Q58 (272). There are 3,044 transfers between the Q44 and the 7 train at Flushing-Main Street Station on an average weekday.

Q46 - Union Turnpike

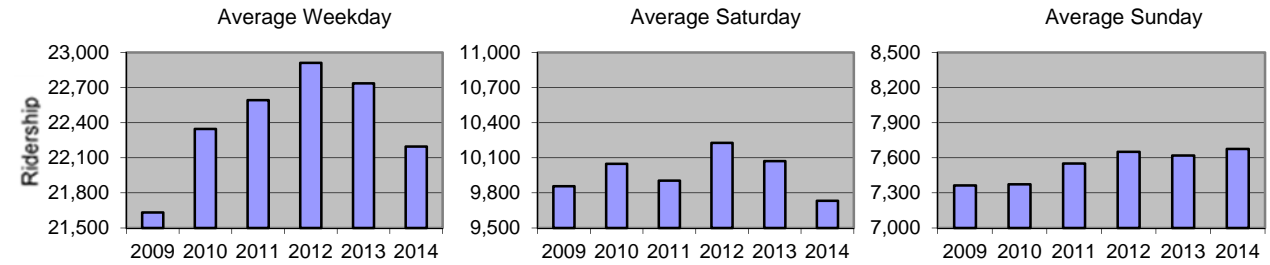
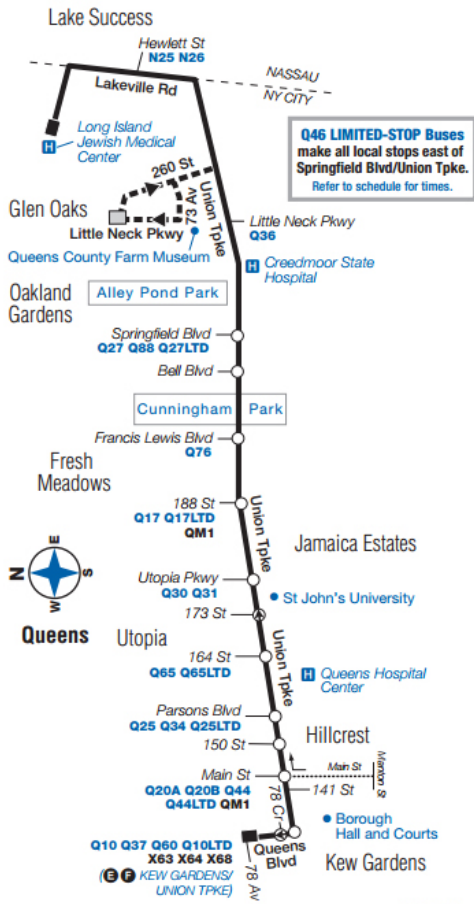
The Q46 operates between the Kew Gardens-Union Turnpike E, F Station and Lakeville Road/Long Island Jewish Hospital in Lake Success or 260th Street/Little Neck Parkway in Glen Oaks. Limited-stop service is provided on the route on weekdays during peak and evening hours.

Neighborhoods Served: Glen Oaks, Bellerose, Oakland Gardens, Fresh Meadows, Hillcrest, and Kew Gardens.

Service Details and Ridership:

Q46 – Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (combined Local & Limited during peak and evening hours, in minutes)	Peak: AM - 2/PM - 2 Off-Peak: Noon - 5/Eve - 2 Overnight: 60	Day: 8 Overnight: 60	Day: 11 Overnight: 60
Average Daily Ridership (2014)	22,196	9,732	7,676

Ridership History: Between 2009 and 2014, there was a 2.6 percent increase in average weekday ridership, a 1.5 percent decrease in average Saturday ridership and a 4.3 percent increase in average Sunday ridership on the route.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q46 - Eastbound	Ons	Offs	Q46 - Westbound	Ons	Offs
Queens Bl & 78 th Av	6,697	0	Queens Bl & 78 th Cr	0	8,885
Union Tpk & Queens Bl	1,902	851	Union Tpk & Springfield Bl	515	828
Union Tpk & Springfield Bl	830	709	Union Tpk & Utopia Pky	849	288
Union Tpk & Utopia Pky	325	1,193	Union Tpk & Main St	575	481
Union Tpk & Parsons Bl	371	738	Union Tpk & Parsons Bl	645	367

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q46 and the Q27 (867), Q46 (757), Q17 (327), Q44 (291), and Q10 (263). There were 6,321 transfers between the Q46 and the E and F trains at Kew Gardens-Union Turnpike Station.

Q48 - Roosevelt Avenue/Ditmars Boulevard/LaGuardia Airport

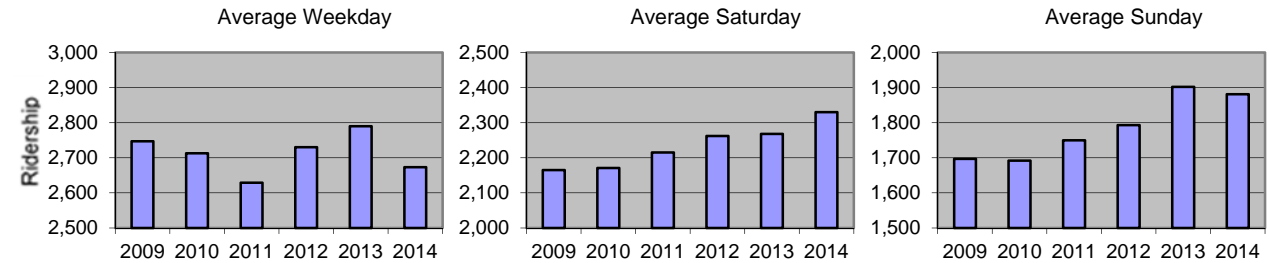
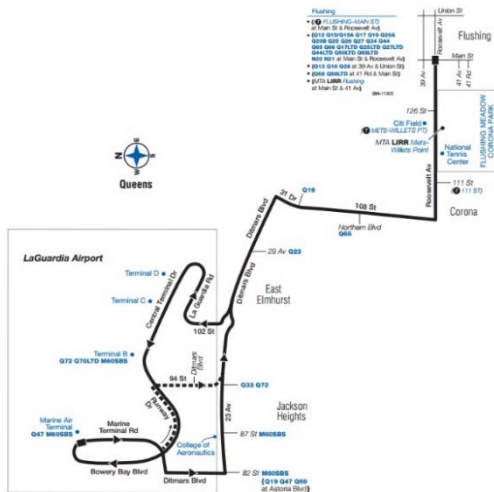
The Q48 operates between Flushing-Main Street 7 Subway Station/LIRR Flushing Station in Flushing and LaGuardia Airport, all terminals.

Neighborhoods Served: Flushing, Corona, and East Elmhurst.

Service Details and Ridership:

Q48 – Service Details	Weekday	Saturday	Sunday
Span	4:30AM - 1:49AM	4:30AM - 1:49AM	4:31AM - 12:16AM
Frequency (in minutes)	Peak: AM - 15/PM - 16 Off-Peak: Noon - 20/Eve - 17 Overnight: N/A	Day: 20 Overnight: N/A	Day: 25 Overnight: N/A
Average Daily Ridership (2014)	2,673	2,330	1,881

Ridership History: Between 2009 and 2014, there was a 2.7 percent decrease in average weekday ridership, a 7.6 percent increase in average Saturday ridership and a 10.9 percent increase in average Sunday ridership on the route.



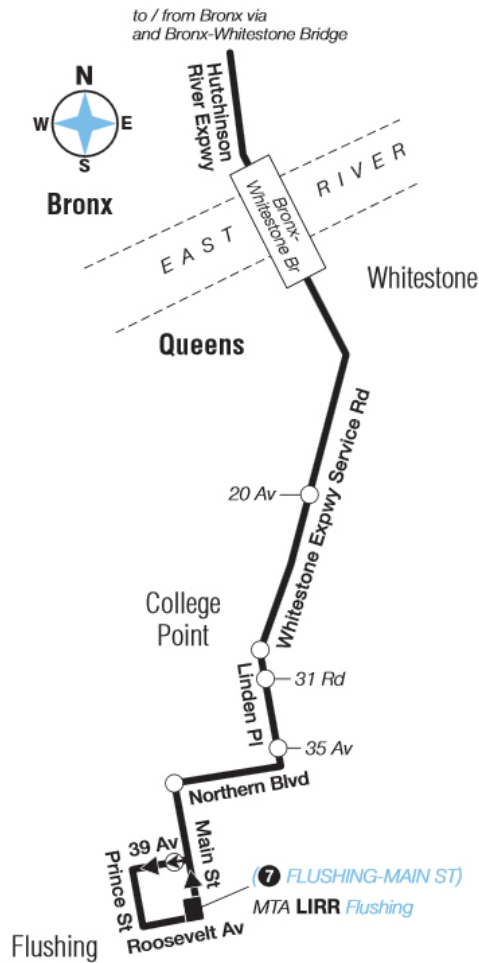
Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q48 - Eastbound	Ons	Offs
Roosevelt Av & 111 th St	233	244
Roosevelt Av & Main St	6	780
108 th St & 38 th Av	107	34
108 th St & Northern Bl	116	12
Roosevelt Av & 108 th St	70	15

Q48 - Westbound	Ons	Offs
Roosevelt Av & Main St	612	0
Roosevelt Av & 111 th St	115	241
LGA Internal Rd & Terminal B	102	239
Roosevelt Av & College Point Bl	284	15
Roosevelt Av & Mets-Willets Point Station	256	18

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q48 and the Q27 (72), Q44 (66), Q25 (53), Q65 (47), and the Q17 (42). There are 201 daily transfers between the Q48 at the 7 train at 111th Street Station on an average weekday.

Q50 - Flushing/Pelham Bay/Coop City Limited



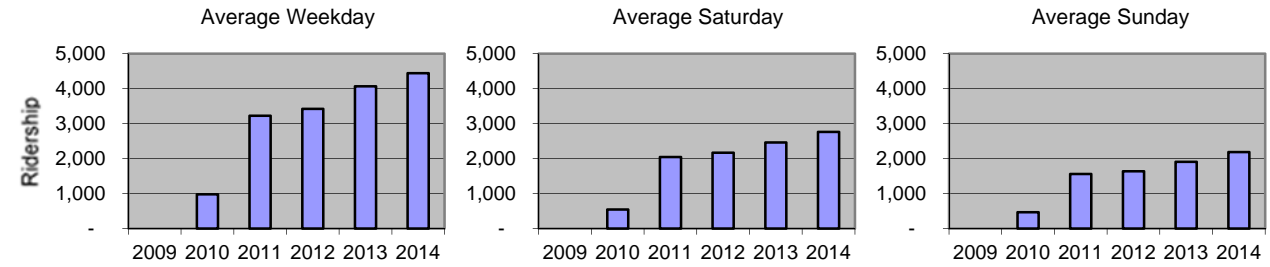
The Q50 operates between Co-Op City in the Bronx and Flushing. Limited-stop service is exclusively operated on the route. The Q50 travels primarily on Main Street, Linden Place, Whitestone Expressway, and Bruckner Boulevard.

Neighborhoods Served: Flushing, College Point, Whitestone, Pelham Bay (Bronx), and Co-op City (Bronx).

Service Details and Ridership:

Q50 – Service Details	Weekday	Saturday	Sunday
Span	4:25AM - 1:15AM	5:05AM - 1:05AM	5:05AM - 1:05AM
Frequency (in minutes)	Peak: AM - 15/PM - 15 Off-Peak: Noon - 30/Eve - 30 Overnight: N/A	Day: 30 Overnight: N/A	Day: 30 Overnight: N/A
Average Daily Ridership (2014)	4,349	2,760	2,187

Ridership History: Q50 service began was implemented in September 2010. Between 2010 and 2014, average weekday ridership increased by 353.4 percent, average Saturday ridership increased by 406.2 percent, and average Sunday ridership increased by 368.1 percent on the route.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q50 - Northbound	Ons	Offs
Bruckner Bl & Wilkinson Av	529	503
Roosevelt Bl & Main St	749	0
Bruckner Bl & Tremont Av	154	165
Main St & Northern Bl	262	42
Baychester Av & IFO PC Richards	33	194

Q50 - Southbound	Ons	Offs
39 th Av & Main St	0	1,122
Bruckner Bl & Wilkinson Av	478	622
Bruckner Bl & Tremont Av	158	115
Edson Av & Bartow Av	182	67
Baychester Av & Darrow Pl	221	18

Transfers: On an average weekday, the most popular Q50 bus to bus transfers were between the Q50 and the Bx12-SBS (237), Q44 (120), Bx12 (86), Bx30 (74), and Q27 (72). There were 571 transfers between the Q50 and the 6 train at Pelham Bay Park Station, and 397 transfers between the Q50 and the 7 train at Flushing-Main St Station on an average weekday.

Q58 - Fresh Pond Rd/Corona Av

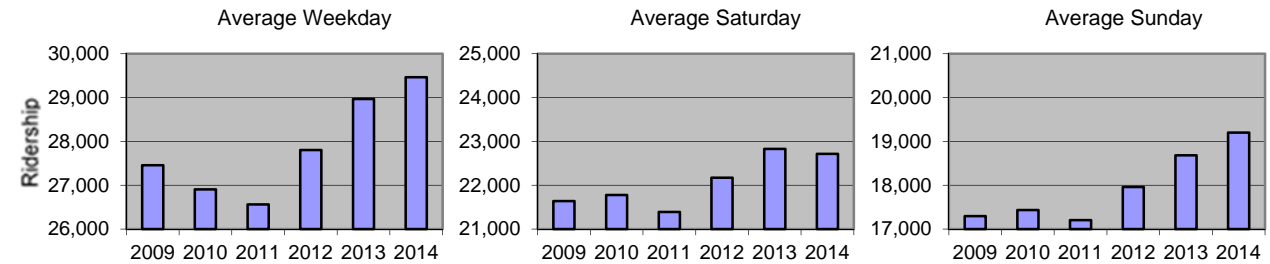
The Q58 operates between Ridgewood/Myrtle-Wyckoff Avenues L and M Station in Ridgewood and Main Street/41st Road in Flushing. Limited-stop service is provided along the route on weekdays, Saturday and Sunday. Limited-stop service does not operate overnight.

Neighborhoods Served: Flushing, Elmhurst, Ridgewood, and Bushwick.

Service Details and Ridership:

Q58 – Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (combined Local & Limited during peak, noon and evening hours on weekdays and day hours on Saturday and Sunday, in minutes)	Peak: AM - 4/PM - 4 Off-Peak: Noon - 4/Eve - 4 Overnight: 60	Day: 4 Overnight: 60	Day: 5 Overnight: 60
Average Daily Ridership (2014)	29,464	22,717	19,201

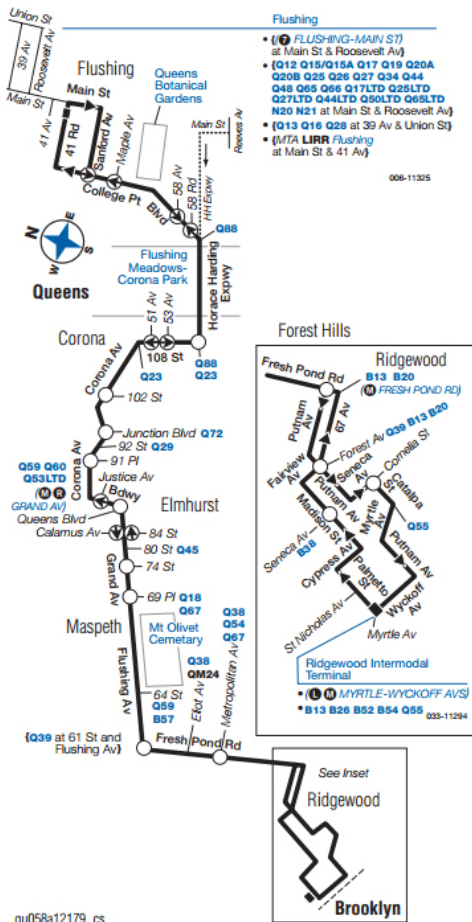
Ridership History: Between 2009 and 2014, there was a 7.3 percent increase in average weekday ridership, a 4.9 percent increase in average Saturday ridership, and an 11.1 percent increase in average Sunday ridership.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q58 - Eastbound	Ons	Offs	Q58 - Westbound	Ons	Offs
Broadway & Justice Av	2,139	3,531	Broadway & Queens Bl	3,097	2,806
41 st Rd & Main St	0	4,805	41 st Rd & Main St	4,236	0
Palmetto St & Myrtle Av	1,868	0	Palmetto Av & St. Nicholas Av	0	1,901
108 th St & Horace Harding Exp	651	760	Putnam Av & Fresh Pond Rd	238	1,182
Corona Av & Junction Bl	464	906	Grand Av & 69 th St	316	1,006

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q58 and the Q23 (306), Q53 (287), Q44 (255), Q59 (254), and the Q27 (254). There were 3,857 transfers between the Q58 and the M and R trains at Grand Avenue-Newtown Station, and 542 transfers to the L and M trains at Myrtle-Wyckoff Avenues Station on an average weekday.



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Q64 - Jewel Avenue

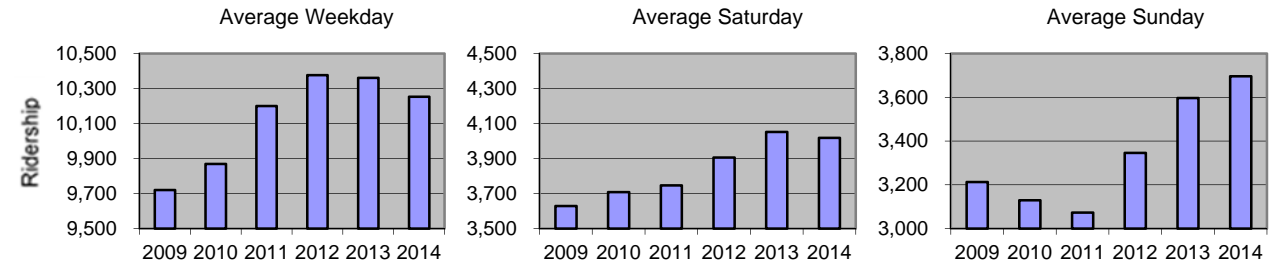
The Q64 operates between Electchester and Forest Hills primarily via Jewel Avenue.

Neighborhoods Served: Electchester, Kew Gardens Hills, and Forest Hills.

Service Details and Ridership:

Q64 - Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (in minutes)	Peak: AM - 4/PM - 3 Off-Peak: Noon - 10/Eve - 6 Overnight: 30	Day: 13 Overnight: 30	Day: 14 Overnight: 30
Average Daily Ridership (2014)	10,253	4,018	3,696

Ridership History: Between 2009 and 2014, there was a 5.5 percent increase in average weekday ridership, a 10.7 percent increase in average Saturday ridership, and a 15.0 percent increase in average Sunday ridership on the route.

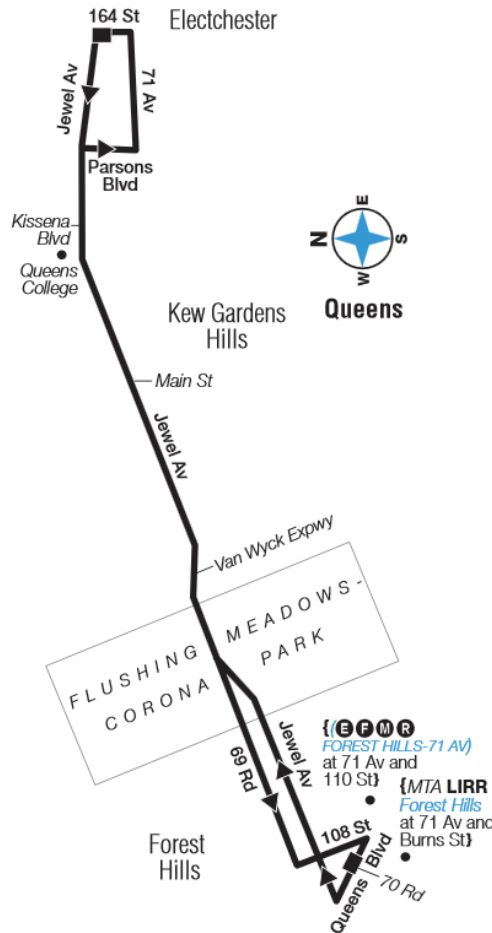


Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q64 - Eastbound	Ons	Offs
Queens Bl & 70 th Rd	4,107	75
Jewel Av & 108 th St	776	489
Jewel Av & 164 th St	0	966
Jewel Av & Kissena Bl	39	769
Jewel Av & Main St	110	595

Q64 - Westbound	Ons	Offs
108 th St & Queens Bl	0	4,958
Jewel Av & 164 th St	793	0
Jewel Av Kissena Bl	691	31
Jewel Av & Main St	541	110
Jewel Av & Parsons Bl	546	10

Transfers: On an average weekday, the most popular Q64 bus to bus transfers were between the Q64 and the Q44 (160), Q20B (118), Q25 (94), Q23 (93), and Q60 (89). There were 4,149 transfers between the Q64 and the E, F, M, and R trains at Forest Hills-71 Av Station on an average weekday.



Q65 - College Point Boulevard/164th Street

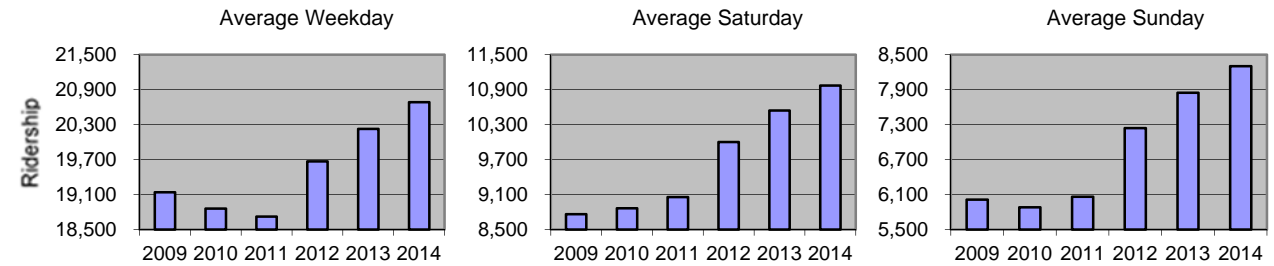
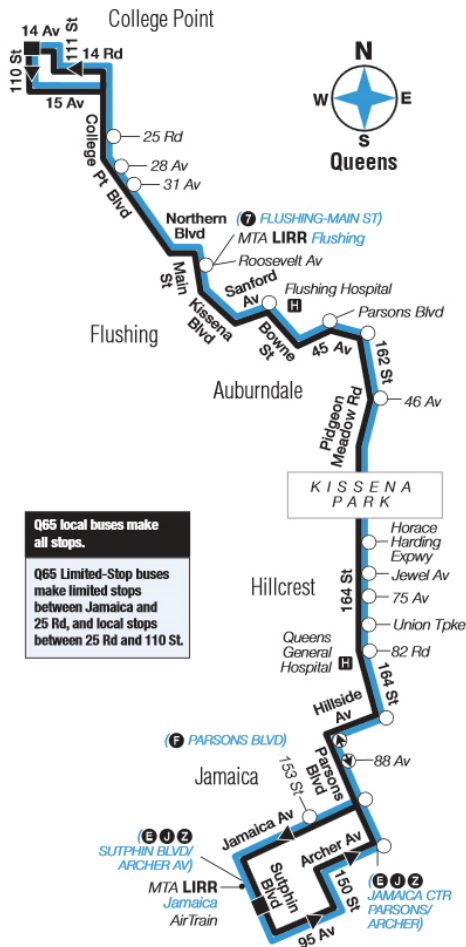
The Q65 operates between Jamaica and College Point. Limited-stop service is provided on the route. The Q65 travels primarily on Archer Avenue, Parsons Boulevard, 164th Street, and College Point Boulevard.

Neighborhoods Served: Jamaica, Jamaica Hills, Hillcrest, Kissena Park, Flushing, and College Point.

Service Details and Ridership:

Q65 - Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (in minutes)	Peak: AM - 10/PM - 10 Off-Peak: Noon - 10/Eve - 12 Overnight: 60	Day: 12 Overnight: 60	Day: 19 Overnight: 60
Average Daily Ridership (2014)	20,685	10,970	8,397

Ridership History: Between 2009 and 2014, there was an 8.1 percent increase in average weekday ridership, a 25.2 percent increase in average Saturday ridership and a 39.7 percent increase in average Sunday ridership on the route.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q65 - Northbound	Ons	Offs
Main St & Roodevelt Av	2,497	3,221
Sutphin Bl & 94 th Av	1,476	0
Archer Av & Bay H	1,222	73
Kissena Bl & Sanford Av	487	753
Main St & Northern Bl	416	660

Q65 - Southbound	Ons	Offs
Main St & Roosevelt Av	2,039	2,833
Parsons Bl & Jamaica Av	115	1,598
Jamaica Av & 153 rd St	157	1,317
Parsons Bl & 88th Av	210	1,210
Kissena Bl & Main St	611	467

Transfers: On an average weekday, the most popular Q65 bus to bus transfers were between the Q65 and the Q17 (241), Q27 (232), Q25 (220), Q46 (209), and Q88 (160). There were 3,285 transfers between the Q65 and 7 train at Flushing-Main St Station, 398 transfers between the Q65 and the E, J, and Z trains at Jamaica Center-Parsons-Archer Station, 280 transfers between the Q65 and the F train at Parsons Blvd Station, and 61 transfers between the Q65 and E, J, and Z trains at Sutphin Blvd-Archer Av-JFK Airport Station on an average weekday.

Q66 - Northern Boulevard/Queens Plaza South

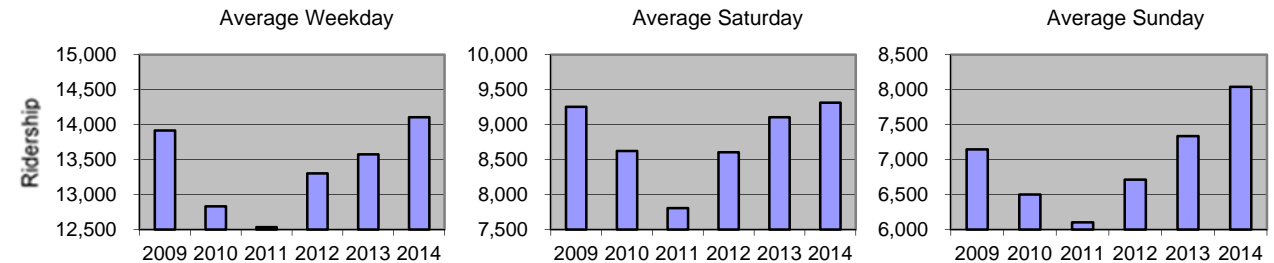
The Q66 operates between Flushing and Long Island City primarily via Northern Boulevard. Select trips operate between Flushing and Woodside only.

Neighborhoods Served: Flushing, East Elmhurst, Woodside, Astoria, Corona, Jackson Heights, and Long Island City.

Service Details and Ridership:

Q66 - Service Details	Weekday	Saturday	Sunday
Span	24 Hours	24 Hours	24 Hours
Frequency (in minutes)	Peak: AM - 5/PM - 7 Off-Peak: Noon - 11/Eve - 11 Overnight: 30	Day: 13 Overnight: 30	Day: 15 Overnight: 30
Average Daily Ridership (2014)	14,105	9,314	8,039

Ridership History: Between 2009 and 2014, there was a 1.4 percent increase in average weekday ridership, a 0.7 percent increase in average Saturday ridership and a 12.5 percent increase in average Sunday ridership on the route.

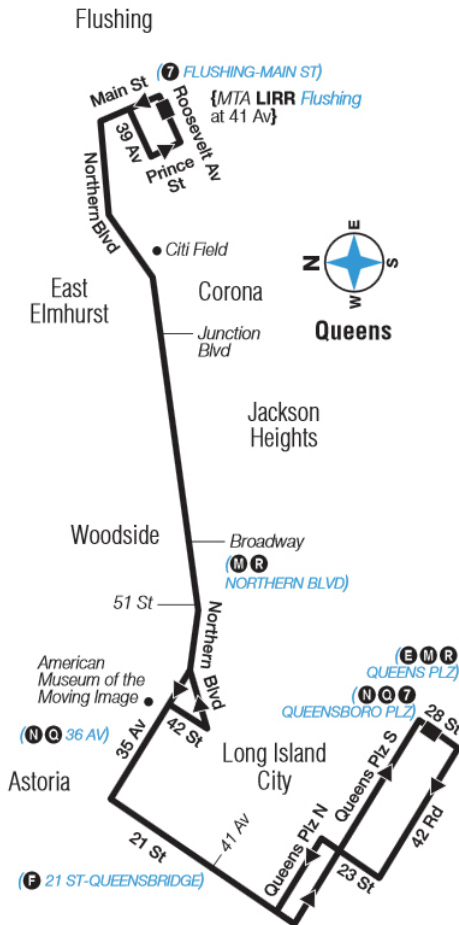


Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

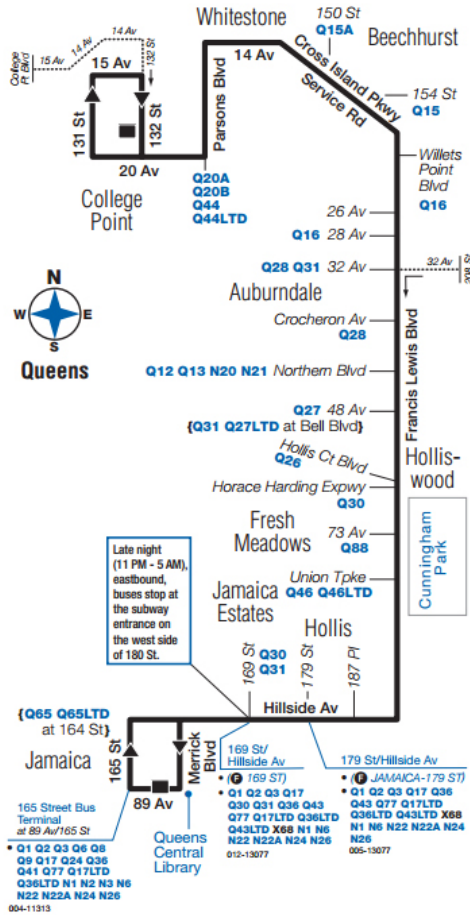
Q66 - Eastbound	Ons	Offs
39 th Av & Main St	0	3,574
Northern Bl & 54 th St	1,241	162
Northern Bl & 82 nd St	375	350
Northern Bl & 89 th St	333	308
Queens Plaza N & 21 st St	576	14

Q66 - Westbound	Ons	Offs
Roosevelt Av & Main St	2,085	0
21 st St & 41 st Av	350	1,311
Northern Bl & Broadway	206	971
Main St & Northern Bl	908	205
Northern Bl & 82 nd St	397	393

Transfers: On an average weekday, the most popular Q66 bus to bus transfers were between the Q66 and the Q44 (264), Q27 (197), Q20B (132), Q23 (132), and Q25 (127). There were 1,296 transfers between the M and R trains at Northern Blvd Station, 307 transfers between the Q66 and F train at 21 St-Queensbridge Station, 195 transfers between the Q66 and the 7 train at Flushing-Main St 7 Station, and 179 transfers between the Q66 and N, Q, and 7 trains at Queensboro Plaza Station on an average weekday.



Q76 - Francis Lewis Boulevard



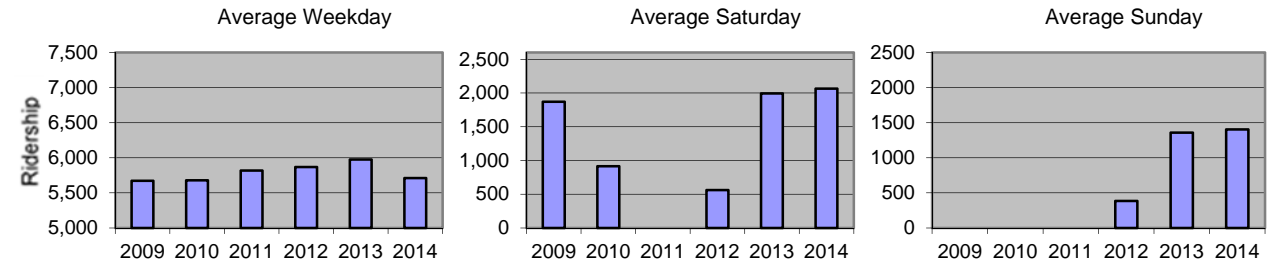
The Q76 operates between Merrick Boulevard/165th Street Bus Terminal in Jamaica and 20th Avenue/131st Street in College Point. Saturday service was discontinued in June 2010 and restored in September 2012. Sunday service was introduced on the route in September 2012.

Neighborhoods Served: Jamaica, Jamaica Estates, Fresh Meadows, Beechhurst, and College Point.

Service Details and Ridership:

Q76 – Service Details	Weekday	Saturday	Sunday
Span	5:00AM – 11:05PM	5:25AM – 10:25PM	6:25AM – 10:25PM
Frequency (in minutes)	Peak: AM - 11/PM - 14 Off-Peak: Noon - 17/Eve - 20 Overnight: N/A	Day: 30 Overnight: N/A	Day: 30 Overnight: N/A
Average Daily Ridership (2014)	5,711	2,066	1,403

Ridership History: Between 2009 and 2014, there was a 0.7 percent increase in average weekday ridership, a 10.4 percent increase in average Saturday ridership. Sunday service was not provided in 2009.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q76 - Northbound	Ons	Offs
165 th St Terminal & 165 th St Terminal Bay 3	347	0
Hillside Av & 168 th Pl	322	12
Francis Lewis Bl & Union Tpk	184	124
Hillside Av & 178 th St	208	59
Hillside Av & 202 nd St	117	121

Q76 - Southbound	Ons	Offs
Hillside Av & 179 th St Subway	39	752
165 th St & 165 th St Terminal	0	549
Francis Lewis Bl & Union Tpk	115	182
Francis Lewis Bl & Northern Bl	198	72
Francis Lewis Bl & Hillside Av	84	167

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q76 and the Q46 (227), Q77 (171), Q44 (148), Q28 (142), and Q76 (127). There were 407 transfers between the Q76 and the F train at the Jamaica-179th Street Station on an average weekday.

Q88 - Horace Harding Expwy/73 Av/Springfield Blvd

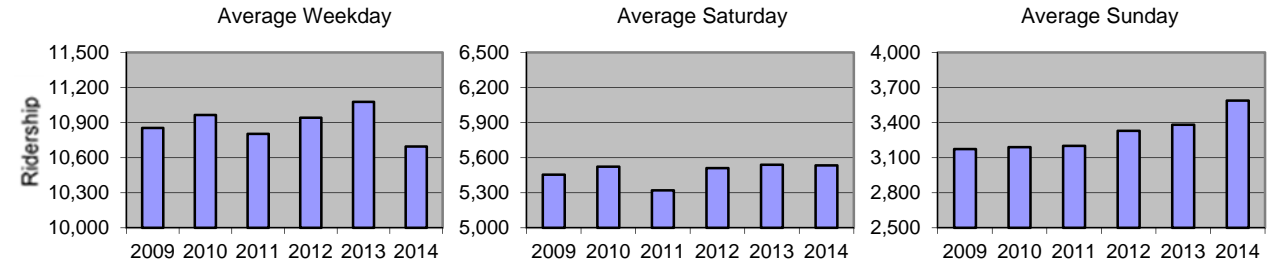
The Q88 operates between the Woodhaven Boulevard M and R Station in Elmhurst and Jamaica Avenue/Springfield Boulevard, Queens Village LIRR Station, in Queens Village.

Neighborhoods Served: Queens Village, Oakland Gardens, Fresh Meadows, Utopia, and Elmhurst.

Service Details and Ridership:

Q88 – Service Details	Weekday	Saturday	Sunday
Span	5:35AM – 12:15AM	6:15AM – 11:15PM	8:30AM – 10:45PM
Frequency (in minutes)	Peak: AM – 3.5/PM - 6 Off-Peak: Noon - 11/Eve - 15 Overnight: N/A	Day: 12 Overnight: N/A	Day: 27 Overnight: N/A
Average Daily Ridership (2014)	10,695	5,534	3,588

Ridership History: Between 2009 and 2014, there was a 1.5 percent decrease in average weekday ridership, a 1.3 percent increase in average Saturday ridership, and a 13.2 percent increase in average Sunday ridership on the route.

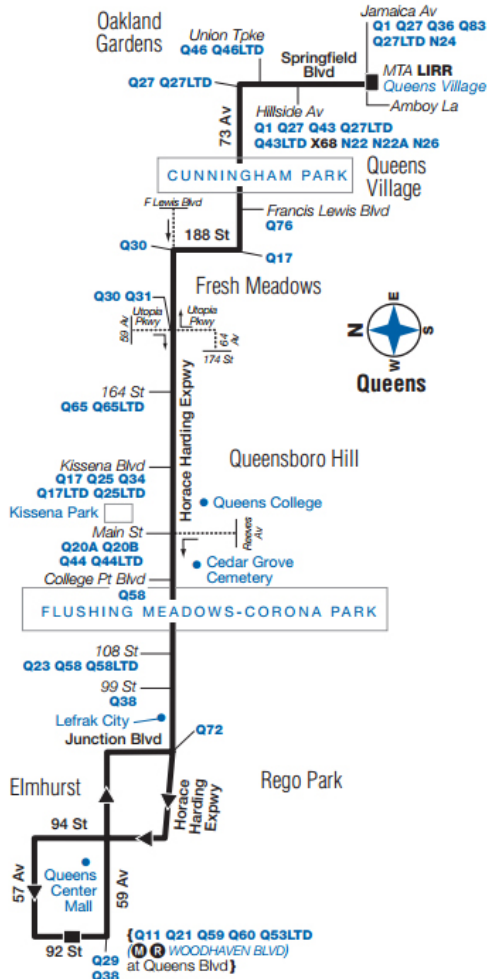


Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

Q88 - Eastbound	Ons	Offs
92 nd St & 59 th Av	2,381	0
Junction Bl & 59 th Av	725	110
Horace Harding Exp & 164 th St	223	380
Horace Harding Exp & Utopia Pky	65	496
Horace Harding Exp & Reeves Av	158	380

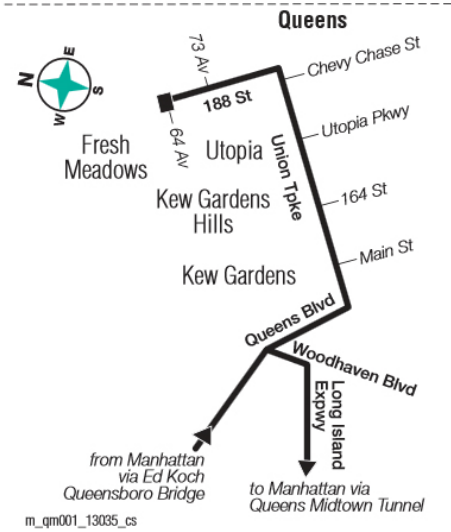
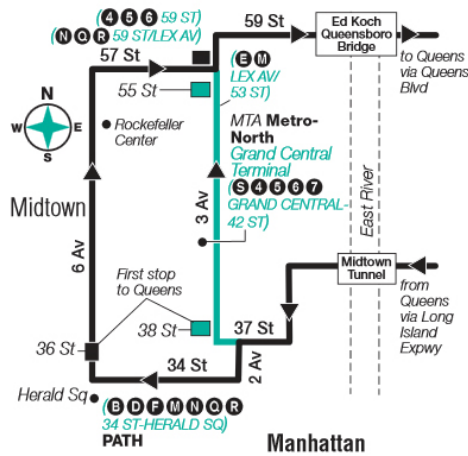
Q88 - Westbound	Ons	Offs
92 nd St & 59 th Av	0	2,945
Horace Harding Exp & Kissena Bl	609	332
Horace Harding Exp & Junction Bl	96	782
Horace Harding Exp & 108 th St	198	418
Horace Harding Exp & Main St	358	216

Transfers: On an average weekday, the most popular bus transfers for the route were between the Q88 and the Q30 (307), Q17 (259), Q27 (225), Q58 (211), and Q46 (196). There were 779 transfers between the Q88 and the M and R trains at Woodhaven Boulevard Station.



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QM1 - Fresh Meadows/Midtown



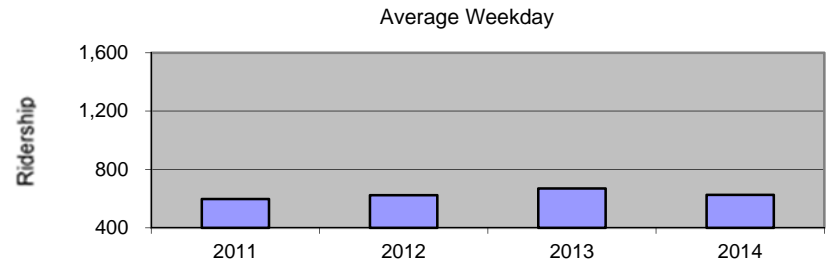
The QM1 is an express route that operates between Midtown and Fresh Meadows. The route operates on weekdays only. In Queens, the route makes stops primarily on Union Turnpike and 188th Street.

Neighborhoods Served: Kew Gardens Hills, Briarwood, Hillcrest, Jamaica Hills, Jamaica Estates, Fresh Meadows and Midtown Manhattan.

Service Details and Ridership:

QM1 - Service Details	Weekday	Saturday	Sunday
Span	6:10AM - 11:19PM	N/A	N/A
Frequency (in minutes)	Peak: AM - 12/PM - 15 Off-Peak: Noon - 30/Eve - 24 Overnight: N/A	Day: N/A Overnight: N/A	Day: N/A Overnight: N/A
Average Daily Ridership (2014)	626	N/A	N/A

Ridership History: Between 2009 and 2014, there was a 57.8 percent decrease in average weekday ridership on the route. To note, the QM1/1A was split in June 2010 into the QM1, QM5, QM6, QM7 and QM8.



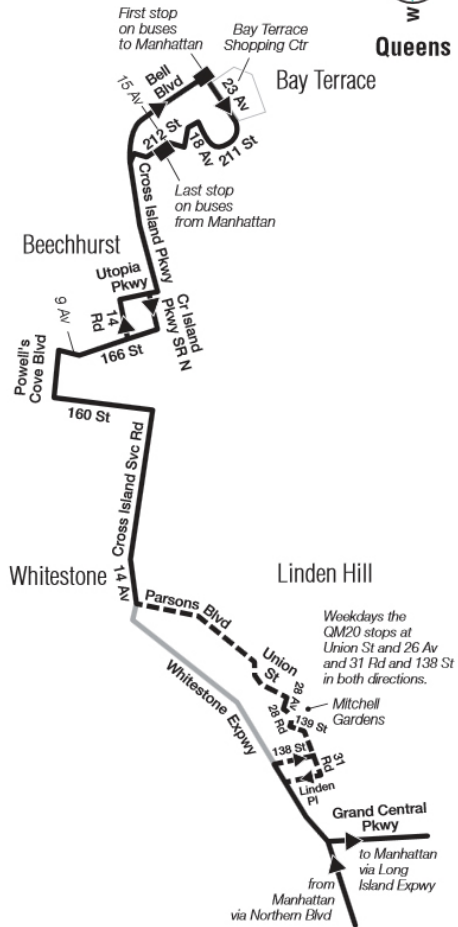
Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

QM1 - Eastbound	Ons	Offs
E 57 th St & Lexington Av	33	8
188 th St & 64 th Av	0	39
Union Tpk & Utopia Pky	1	37
6 th Av & W 37 th St	36	0
3 rd Av & E 44 th St	31	0

QM1 - Westbound	Ons	Offs
188 th St & 64 th Av	90	0
E 34 th St & Park Av	0	81
Union Tpk & 188 th St	47	6
Union Tpk & Utopia Pky	45	1
188 th St & 73 rd Av	44	1

Transfers: Transfers occur among the Union Turnpike express bus routes: the QM1, QM5, QM6, QM7, and QM8. These routes were previously all labeled QM1/1A. Customers sometimes board the first bus that they see and then transfer at a location along Union Turnpike traveled by the other routes.

QM2 - Bay Terrace/Midtown



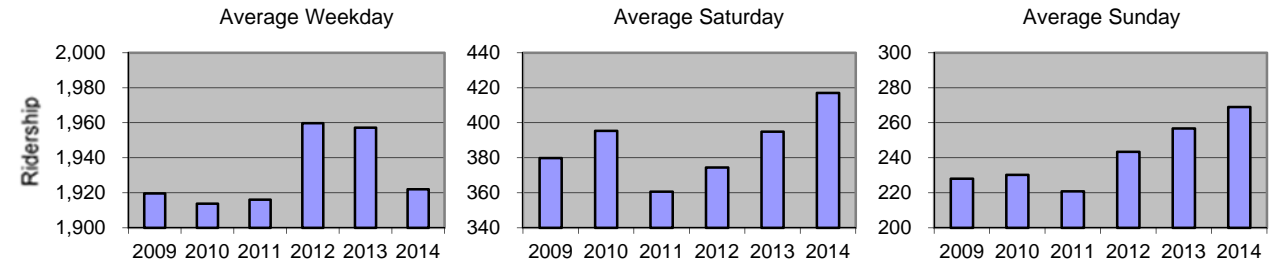
The QM2 is an express route that operates between Midtown Manhattan and Bay Terrace. In Queens, the QM2 travels primarily on Whitestone Expressway, Cross Island Parkway, 164th Street, and Bell Boulevard.

Neighborhoods Served: Bay Terrace, Beechhurst, Whitestone, Linden Hill and Midtown Manhattan.

Service Details and Ridership:

QM2 - Service Details	Weekday	Saturday	Sunday
Span	5:45AM – 12:00AM	6:40AM - 12:10AM	7:40AM - 11:10PM
Frequency (in minutes)	Peak: AM - 12/PM - 15 Off-Peak: Noon - 30/Eve - 24 Overnight: N/A	Day: 60 Overnight: N/A	Day: 60 Overnight: N/A
Average Daily Ridership (2014)	1,922	417	269

Ridership History: Between 2009 and 2014, there was a 0.1 percent increase in average weekday ridership, a 9.8 percent increase in average Saturday ridership, and an 18.0 percent increase in average Sunday ridership on the route.



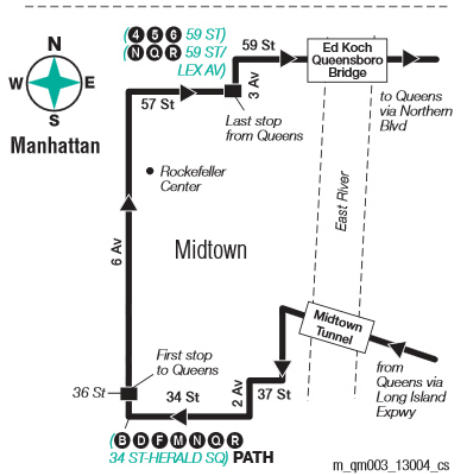
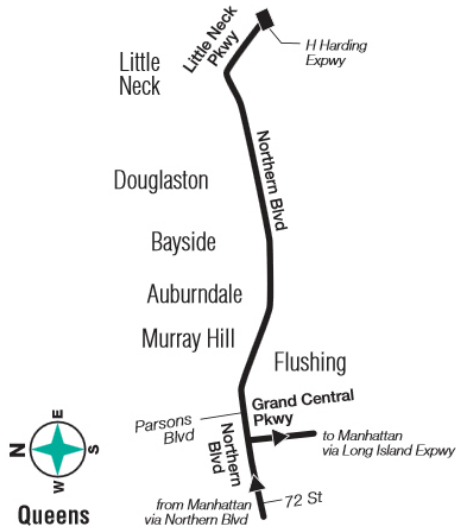
Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

QM2 - Eastbound	Ons	Offs
E 57 th St & Lexington Av	133	63
6 th Av & W 35 th St	150	0
Powells Cove Bl & 162 nd St	1	131
14 th Av & 147 th St	0	110
160 th St & Cross Island Pky	0	106

QM2 - Westbound	Ons	Offs
E. 34 th St & Park Av	4	183
Powells Cove Bl & 162 nd St	155	1
Cross Island Pky & 160 th St	141	1
3 rd Av & E 44 th St	1	124
14 th Av & 147 th St	122	2

Transfers: The QM2 has many transfers from the morning inbound buses to buses and subways headed downtown.

QM3 - Little Neck/Midtown



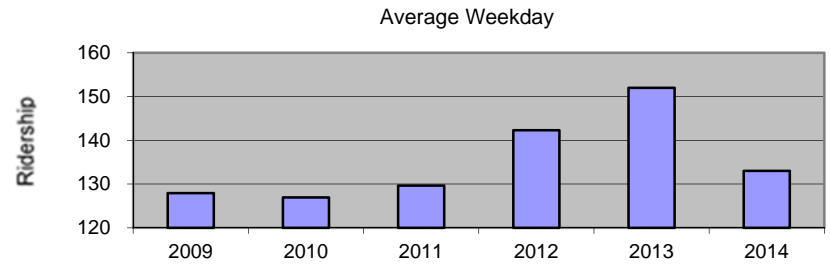
The QM3 is an express route that operates between Midtown Manhattan and Little Neck. The route operates on weekdays during peak hours in the peak direction of travel only. In Queens, the QM3 makes stops primarily on Northern Boulevard and Little Neck Parkway.

Neighborhoods Served: Little Neck, Douglaston, Bayside, Auburndale, Flushing and Midtown Manhattan.

Service Details and Ridership:

QM3 - Service Details	Weekday	Saturday	Sunday
Span	6:40AM - 7:40AM/5:05PM - 6:05PM	N/A	N/A
Frequency (in minutes)	Peak: AM - 30/PM - 30 Off-Peak: Noon - N/A / Eve - N/A Overnight: N/A	Day: N/A Overnight: N/A	Day: N/A Overnight: N/A
Average Daily Ridership (2014)	133	N/A	N/A

Ridership History: Between 2009 and 2014, there was a 4.0 percent increase in average weekday ridership on the route.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

QM3 - Eastbound	Ons	Offs
6 th Av & W 48 th St	10	0
E 57 th St & Madison Av	10	0
6 th Av & W 55 th St	9	0
Northern Bl & 159 th St	0	5
6 th Av & W 44 th St	5	0

QM3 - Westbound	Ons	Offs
E 34 th St & Park Av	0	23
6 th Av & W 41 st St	0	14
6 th Av & W 48 th St	0	10
E 57 th St & Madison Av	1	9
Northern Bl & 161 st St	8	0

Transfers: The QM3 is an express route that is used primarily as a single-seat ride and does not have a significant number of transfers.

QM4 - Electchester/Midtown

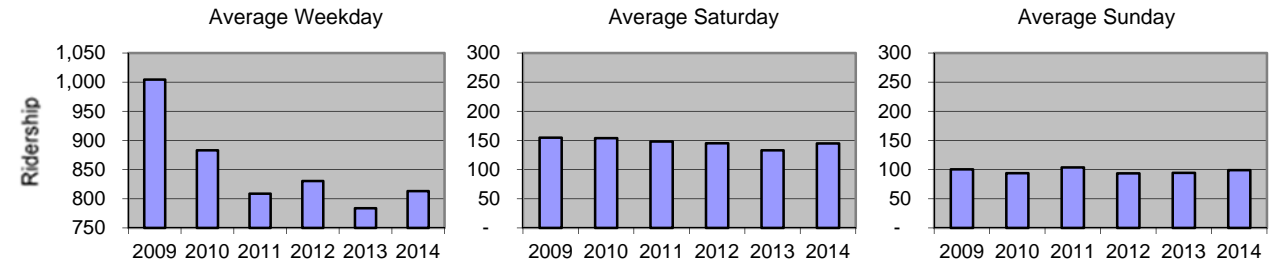
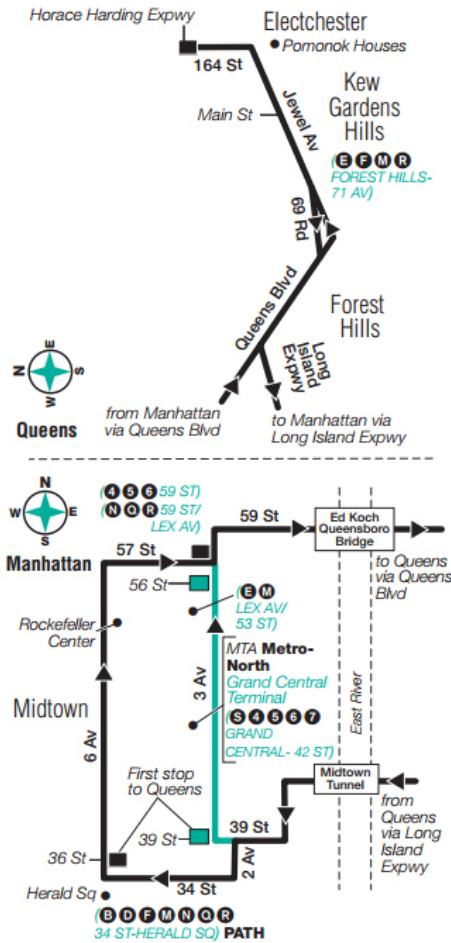
The QM4 is an express route that operates between Midtown Manhattan and Electchester. Select trips operate via 3rd Avenue in Manhattan during peak periods. In Queens, the route makes stop along Jewel Avenue and 164th Street, primarily.

Neighborhoods Served: Kew Gardens Hills, Electchester, Pomonock and Midtown Manhattan.

Service Details and Ridership:

QM4 - Service Details	Weekday	Saturday	Sunday
Span	5:45AM – 11:50PM	7:10AM – 11:40PM	8:10AM – 10:40PM
Frequency (in minutes)	Peak: AM - 20/PM - 30 Off-Peak: Noon - 60/Eve - 60 Overnight: N/A	Day: 60 Overnight: 60	Day: 60 Overnight: 60
Average Daily Ridership (2014)	813	145	99

Ridership History: Between 2009 and 2014, there was a 19.1 percent decrease in average weekday ridership, a 6.4 percent decrease in average Saturday ridership, and a 1.4 percent decrease in average Sunday ridership on the route.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

QM4 - Eastbound	Ons	Offs	QM4 - Westbound	Ons	Offs
6 th Av & W 36 th St	55	0	E 34 th St & Park Av	0	91
164 th St & Horace Harding Exp	0	40	164 th St & Horace Harding Exp	67	0
E 57 th St & 3 rd Av	33	3	Jewel Av & Main St	60	3
Jewel Av & Kissena Bl	0	33	164 th St & 69 th Av	63	0
6 th Av & W. 48 th St	30	0	Jewel Av & Parsons Bl	62	1

Transfers: The QM4 is an express route that is used primarily as a single-seat ride and does not have a significant number of transfers.

QM5 - Glen Oaks/Midtown

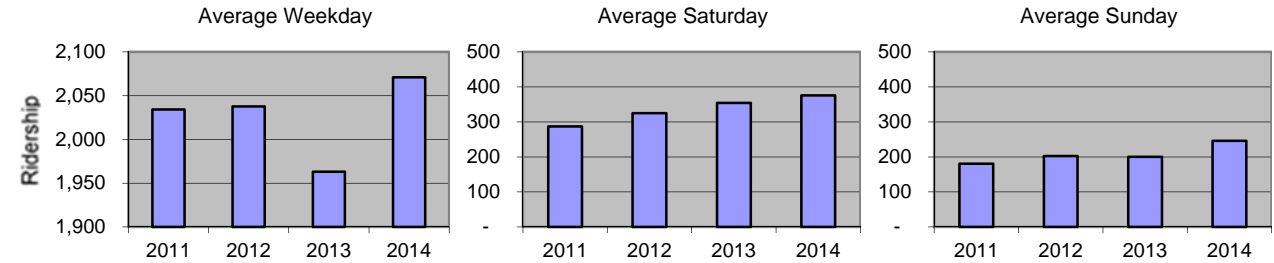
The QM5 is an express route that operates between Midtown Manhattan and Glen Oaks. During peak hours, select trips operate via 3rd Avenue in Manhattan. In Queens, the QM5 primarily makes stops along Union Turnpike, 73rd Avenue, Horace Harding Parkway, and Little Neck Parkway.

Neighborhoods Served: Kew Gardens Hills, Briarwood, Hillcrest, Jamaica Hills, Jamaica Estates, Fresh Meadows, Oakland Gardens, Douglaston, Glen Oaks and Midtown Manhattan.

Service Details and Ridership:

QM5 - Service Details	Weekday	Saturday	Sunday
Span	5:30AM – 12:00AM	6:30AM – 12:00AM	7:30AM – 11:00PM
Frequency (in minutes)	Peak: AM - 12/PM - 12 Off-Peak: Noon - 30/Eve - 24 Overnight: N/A	Day: 60 Overnight: 60	Day: 60 Overnight: 60
Average Daily Ridership (2014)	2,071	376	246

Ridership History: Service on this route was implemented in June. Between 2010 and 2014, average weekday ridership increased by 88.3 percent, average Saturday ridership increased by 165.1 percent, and average Sunday ridership increased by 157.1 percent on the route.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday. Eastbound bus stop boarding and alighting data was not available for this route.

QM5 - Eastbound	Ons	Offs
N/A*		
N/A*		
N/A*		
N/A*		
N/A*		

QM5 - Westbound	Ons	Offs
E 34 th St & Park Av	0	240
W 34 th St & 5 th Av	0	127
3 rd Av & E. 44 th St	0	121
E 57 th St & Lexington Av	0	117
Union Tpk & 188 th St	62	36

*dataset from ORCA reports from May 2014 missing some data

Transfers: Transfers occur among the Union Turnpike express bus routes: the QM1, QM5, QM6, QM7, and QM8. These routes were previously all labeled QM1/1A.

QM6 - Lake Success/Midtown



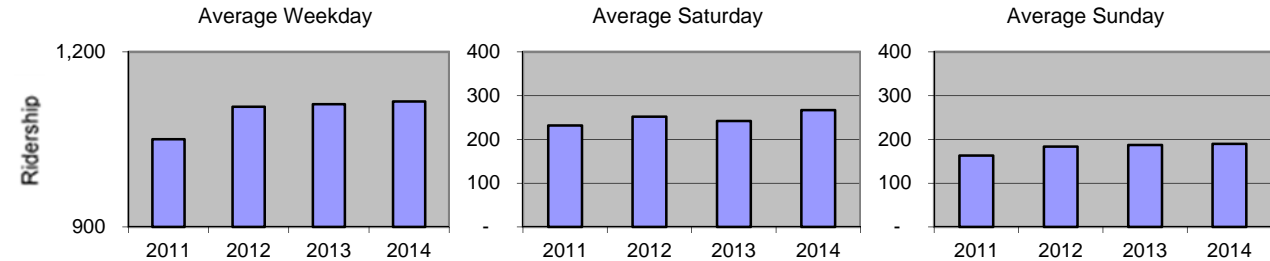
The QM6 is an express route that operates between Midtown Manhattan and North Shore Towers in Lake Success. During peak hours, select trips operate via 3rd Avenue in Manhattan. In Queens, the QM6 primarily makes stops along Union Turnpike.

Neighborhoods Served: Kew Gardens Hills, Briarwood, Hillcrest, Jamaica Hills, Jamaica Estates, Oakland Gardens, Hollis Hills, Bellerose, Lake Success, and Midtown Manhattan.

Service Details and Ridership:

QM6 - Service Details	Weekday	Saturday	Sunday
Span	5:45AM – 12:30AM	7:00AM – 11:30PM	8:00AM – 10:30PM
Frequency (in minutes)	Peak: AM - 15/PM - 26 Off-Peak: Noon - 60/Eve - 40 Overnight: N/A	Day: 60 Overnight: 60	Day: 60 Overnight: 60
Average Daily Ridership (2014)	1,115	267	190

Ridership History: Service on this route was implemented in June 2010. Between 2010 and 2014, average weekday ridership increased by 123.9 percent, average Saturday ridership increased by 125.6 percent, and average Sunday ridership increased by 144.5 percent on the route.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday. Eastbound bus stop boarding and alighting data was not available for this route.

QM6 - Eastbound	Ons	Offs
N/A*		
N/A*		
N/A*		
N/A*		
N/A*		

QM6 - Westbound	Ons	Offs
E 34 th St & Park Av	2	171
E 57 th St & Lexington Av	0	96
W 34 th St & 5 th Av	3	83
Union Tpk & 188 th St	39	27
E 34 th St & 3 rd Av	1	63

*dataset from ORCA reports from May 2014 missing some data

Transfers: Transfers occur among the Union Turnpike express bus routes: the QM1, QM5, QM6, QM7, and QM8. These routes were previously all labeled QM1/1A.

QM7 - Fresh Meadows/Downtown



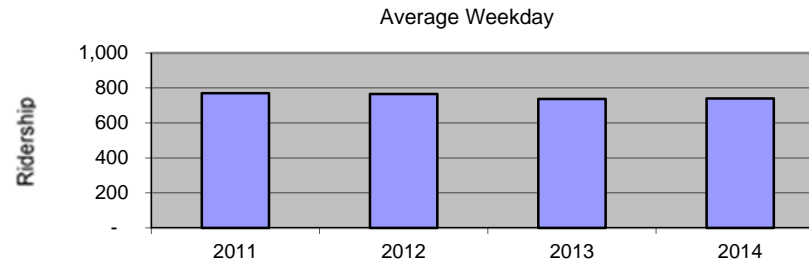
The QM7 is an express route that operates between Downtown Manhattan and Fresh Meadows. The route operates on weekdays during peak hours and in the peak direction of travel only. In Queens, the QM7 makes stops primarily along Union Turnpike and 188th Street.

Neighborhoods Served: Kew Gardens Hills, Briarwood, Hillcrest, Jamaica Hills, Jamaica Estates, Fresh Meadows and Downtown Manhattan.

Service Details and Ridership:

QM7 - Service Details	Weekday	Saturday	Sunday
Span	6:00AM - 9:20AM/2:15PM - 7:15PM	N/A	N/A
Frequency (in minutes)	Peak: AM - 10/PM - 24 Off-Peak: Noon - N/A / Eve - N/A Overnight: N/A	Day: N/A Overnight: N/A	Day: N/A Overnight: N/A
Average Daily Ridership (2014)	740	N/A	N/A

Ridership History: Service on this route was implemented in June 2010. Between 2010 and 2014, average weekday ridership increased by 90.5 percent on the route.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

QM7 - Eastbound	Ons	Offs
Church St & Vesey St	45	0
Park Row & Beekman St	42	0
Frankfort St & Pearl St	40	1
188 th St & 64 th Av	0	38
Union Tpk & 150 th St	0	30

QM7 - Westbound	Ons	Offs
Church St & Vesey St	0	129
Park Row & Beekman St	0	103
Union Tpk & 188 th St	84	11
Union Tpk & Utopia Pky	85	3
188 th St & 64 th Av	71	0

Transfers: Transfers occur among the Union Turnpike express bus routes: the QM1, QM5, QM6, QM7, and QM8. These routes were previously all labeled QM1/1A.

QM8 - Glen Oaks/Downtown



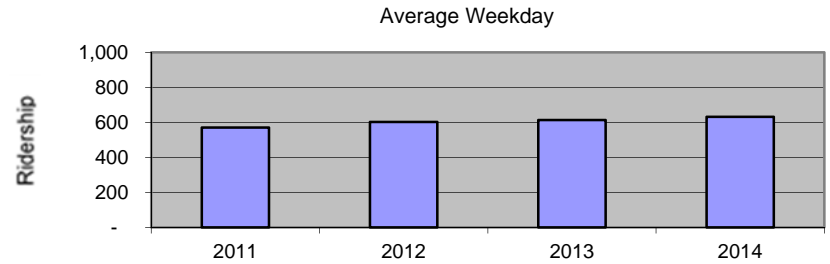
The QM8 is an express route that operates between Downtown Manhattan and Glen Oaks. The route operates on weekdays during peak hours and in the peak direction of travel only. In Queens, the QM8 makes stops primarily along Union Turnpike, 73rd Avenue, Horace Harding Parkway and Little Neck Parkway.

Neighborhoods Served: Kew Gardens Hills, Briarwood, Hillcrest, Jamaica Hills, Jamaica Estates, Fresh Meadows, Oakland Gardens, Douglaston, Glen Oaks and Downtown Manhattan.

Service Details and Ridership:

QM8 - Service Details	Weekday	Saturday	Sunday
Span	5:57AM - 7:37AM/4:35PM - 7:30PM	N/A	N/A
Frequency (in minutes)	Peak: AM - 10/PM - 20 Off-Peak: Noon - N/A / Eve - N/A Overnight: N/A	Day: N/A Overnight: N/A	Day: N/A Overnight: N/A
Average Daily Ridership (2014)	632	N/A	N/A

Ridership History: Service on this route was implemented in June 2010. Between 2010 and 2014, average weekday ridership increased by 115.5 percent on the route.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday. Eastbound bus stop boarding and alighting data was not available for this route.

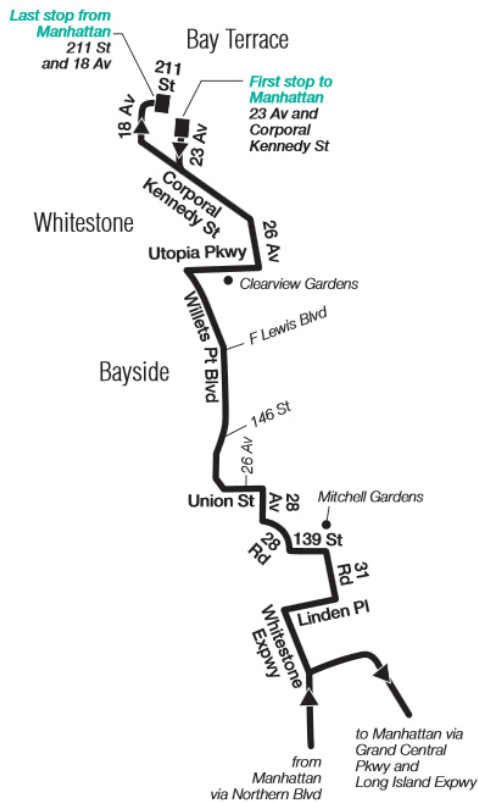
QM8 - Eastbound	Ons	Offs
N/A*		
N/A*		
N/A*		
N/A*		
N/A*		

QM8 - Westbound	Ons	Offs
Park Row & Beekman St	20	49
Frankfort St & Pearl St	0	31
260 th St & Union Tpk	18	0
260 th St & 73 rd Av	16	1
Church St & Vesey St	0	15

*dataset from ORCA reports from May 2014 missing some data

Transfers: Transfers occur among the Union Turnpike express bus routes: the QM1, QM5, QM6, QM7, and QM8. These routes were previously all labeled QM1/1A.

QM20 - Bay Terrace/Midtown via Clearview



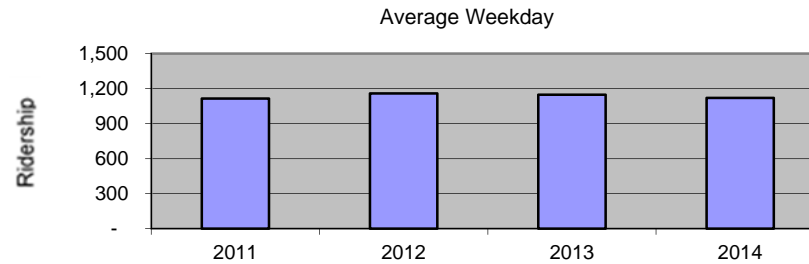
The QM20 is an express route that operates between Downtown Manhattan and Bay Terrace. The route operates on weekdays only. In Queens, the QM20 travels primarily on the Whitestone Expressway, Utopia Parkway, Willets Point Boulevard, and 26th Avenue.

Neighborhoods Served: Bay Terrace, Whitestone, Linden Hill and Midtown Manhattan.

Service Details and Ridership:

QM20 - Service Details	Weekday	Saturday	Sunday
Span	5:45AM – 11:30PM	N/A	N/A
Frequency (in minutes)	Peak: AM - 9/PM - 14 Off-Peak: Noon - 60/Eve - 40 Overnight: N/A	Day: N/A Overnight: N/A	Day: N/A Overnight: N/A
Average Daily Ridership (2014)	1,123	N/A	N/A

Ridership History: Service on this route was implemented in September 2011. Between 2011 and 2014, average weekday ridership increased by 0.4 percent on the route.



Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday. Westbound bus stop boarding and alighting data was not available for this route.

QM20 - Eastbound	Ons	Offs
Union St & 26 th Av	0	194
E 57 th St & Lexington Av	93	88
6 th Av & W 35 th St	174	0
211 th St & 18 th Av	0	63
6 th Av & W 48 th St	61	1

QM20 - Westbound	Ons	Offs
N/A*		
N/A*		
N/A*		
N/A*		
N/A*		

*dataset from ORCA reports from May 2014 missing some data

Transfers: The QM20 has many transfers from the morning inbound buses to buses and subways headed downtown.

X68 - Floral Park/Midtown Manhattan

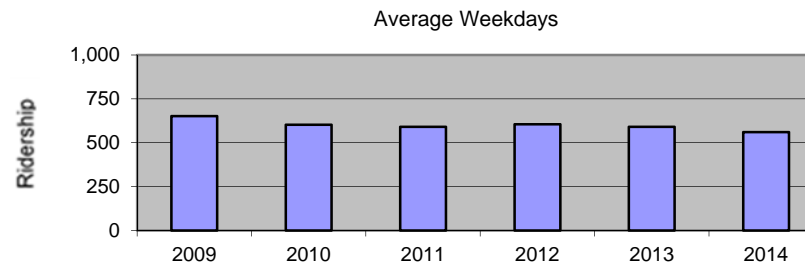
The X68 operates between 268th Street/Hillside Avenue in Floral Park and Midtown Manhattan on weekdays during peak periods only. During the morning peak period, trips operate from Floral Park to either East 23rd Street/1st Avenue, East 57th Street/3rd Avenue, or East 23rd Street/1st Avenue via East 57th Street/3rd Avenue. During the afternoon peak period, trips operate from East 23rd Street/1st Avenue via East 57th Street/3rd Avenue to Floral Park.

Neighborhoods Served: Floral Park, Queens Village, Jamaica Estates, Jamaica, Kew Gardens, and Midtown Manhattan.

Service Details and Ridership:

X68 – Service Details	Weekday	Saturday	Sunday
Span	6:20AM - 10:20AM/4:10PM - 8:15PM	N/A	N/A
Frequency (in minutes)	Peak: AM - 15/PM - 15 Off-Peak: Noon – N/A / Eve – N/A Overnight: N/A	Day: N/A Overnight: N/A	Day: N/A Overnight: N/A
Average Daily Ridership (2014)	598	N/A	N/A

Ridership History: Between 2009 and 2014, the route saw an 8.2 percent decrease in average weekday ridership.

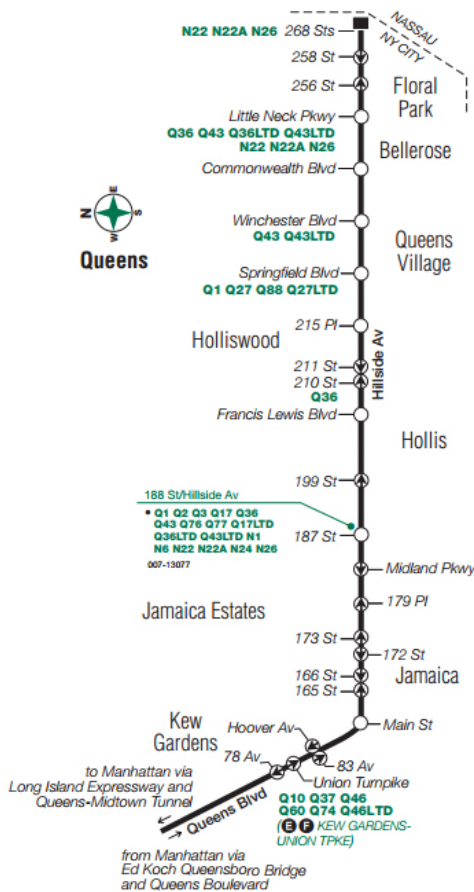


Bus Stops: Below is a list of the five highest ridership bus stops by direction for the route on an average weekday.

X68 - Eastbound	Ons	Offs
Madison Av & E 42 nd St	58	0
Madison Av & E 33 rd St	51	0
Madison Av & E 48 th St	41	1
Hillside Av & Springfield Bl	0	36
Madison Av & E 54 th St	35	1

X68 - Westbound	Ons	Offs
Hillside Av & 179 th St Subway	12	40
E 42 nd St & Park Av	0	52
E 34 th St & Park Av	0	40
Queens Bl & 78 th Av	35	1
Hillside Av & Little Neck Pky	36	0

Transfers: The X68 is an express route that is used primarily as a single-seat ride and does not have a significant number of transfers.



APPENDIX C – ADDITIONAL DATA

- Table C-1. On-Time Performance and Wait Assessment by Route
- Table C-2. Bus Speeds by Route and Time Period
- Table C-3. Bus Shelters in Northeast Queens by Route
- Table C-4. “Not in Service” Buses by Route
- Table C-5. Bus to Subway Transfers: Stations with >100 Transfers
- Table C-6. Bus To Bus Transfers with >225 Transfers
- Table C-7. Average Trip Length – NYCT Buses only
- Table C-8. Q12 Origin-Destination Matrix
- Table C-9. Q17 Origin-Destination Matrix
- Table C-10. Q27 Origin-Destination Matrix
- Table C-11. Q43 Origin-Destination Matrix
- Table C-12. Q46 Origin-Destination Matrix
- Table C-13. Q88 Origin-Destination Matrix
- Table C-14. Origin-Destination Matrix for Northeast Queens
- Table C-15. Average Ridership by Time of Day

- Figure C-1. Overnight Bus Boarding
- Figure C-2. Overnight Bus Alighting
- Figure C-3. Q12 Origin-Destination Web
- Figure C-4. Q17 Origin-Destination Web
- Figure C-5. Q27 Origin-Destination Web
- Figure C-6. Q43 Origin-Destination Web
- Figure C-7. Q46 Origin-Destination Web
- Figure C-8. Q88 Origin-Destination Web

Performance

Table C-1. On-Time Performance and Wait Assessment by Route

Route	WEEKDAY		SATURDAY		SUNDAY	
	OTP	WA	OTP	WA	OTP	WA
5 Borough Average	65.9%	79.2%	60.2%	80.2%	64.0%	81.4%
Queens Average	67.8%	79.4%	63.3%	81.4%	67.5%	83.9%
Northeast Queens Average	72.4%	82.7%	67.5%	83.5%	71.7%	85.9%
Q1	76%	87%	74%	85%	77%	89%
Q12	78%	87%	79%	91%	78%	91%
Q13	76%	85%	71%	88%	68%	90%
Q15	82%	89%	76%	95%	80%	97%
Q15A	85%	89%	81%	92%	89%	97%
Q16	79%	86%	75%	91%	73%	88%
Q17	64%	77%	63%	80%	72%	85%
Q17 LTD	60%	71%	NA	NA	NA	NA
Q19	72%	83%	78%	94%	88%	95%
Q20A	77%	85%	70%	82%	74%	87%
Q20B	79%	88%	NA	NA	NA	NA
Q25	51%	75%	56%	79%	64%	79%
Q25 LTD	44%	69%	NA	NA	NA	NA
Q26	85%	86%	NA	NA	NA	NA
Q27	76%	85%	71%	84%	75%	87%
Q27 LTD	76%	81%	NA	NA	NA	NA
Q28	80%	89%	72%	93%	79%	93%
Q30	73%	81%	74%	87%	76%	87%
Q31	77%	84%	77%	92%	74%	90%
Q34	64%	81%	NA	NA	NA	NA
Q36	81%	89%	79%	92%	81%	93%
Q36 LTD	80%	81%	NA	NA	NA	NA
Q43	78%	84%	78%	88%	74%	83%
Q43 LTD	82%	85%	NA	NA	NA	NA
Q44	73%	87%	50%	73%	57%	83%
Q44 LTD	72%	82%	59%	79%	61%	80%
Q46	77%	84%	80%	89%	78%	88%
Q48	72%	85%	71%	88%	72%	88%
Q50 LTD	73%	85%	62%	83%	65%	85%
Q58	65%	85%	61%	80%	64%	81%
Q58 LTD	61%	81%	60%	81%	64%	80%
Q64	69%	80%	78%	95%	78%	93%
Q65	75%	83%	72%	84%	76%	87%
Q65 LTD	81%	84%	NA	NA	NA	NA
Q66	70%	81%	37%	66%	68%	83%
Q76	75%	81%	73%	86%	79%	93%
Q88	70%	78%	63%	77%	66%	77%

Table C-2. Bus Speeds by Route and Time Period

Route	Service Type	Time Period	Avg. Speed (Mph)	Route	Service Type	Time Period	Avg. Speed (Mph)
Q1	Local	Mid to 6am	12.8	Q36	Local	7pm to Mid	10.6
Q1	Local	6am to 10am	11.3	Q36	LTD	6am to 10am	10.6
Q1	Local	10am to 3pm	9.9	Q36	LTD	3pm to 7pm	10am
Q1	Local	3pm to 7pm	8.6	Q43	Local	Mid to 6am	12.9
Q1	Local	7pm to Mid	9.9	Q43	Local	6am to 10am	11.7
Q12	Local	6am to 10am	8.4	Q43	Local	10am to 3pm	10.6
Q12	Local	10am to 3pm	8.7	Q43	Local	3pm to 7pm	8.7
Q12	Local	3pm to 7pm	8.4	Q43	Local	7pm to Mid	10.9
Q12	Local	7pm to Mid	9.1	Q43	LTD	6am to 10am	12.7
Q13	Local	6am to 10am	8.6	Q43	LTD	3pm to 7pm	10.4
Q13	Local	7pm to Mid	9.9	Q43	LTD	7pm to Mid	10.1
Q16	Local	3pm to 7pm	11.2	Q44	Local	Mid to 6am	12.9
Q20A	Local	6am to 10am	7.4	Q44	Local	7pm to Mid	11.5
Q20A	Local	10am to 3pm	6.5	Q44	LTD	Mid to 6am	10.5
Q20A	Local	3pm to 7pm	6.5	Q44	LTD	6am to 10am	9.1
Q20A	Local	7pm to Mid	8.2	Q44	LTD	10am to 3pm	9
Q20B	Local	6am to 10am	7.2	Q44	LTD	3pm to 7pm	8.4
Q20B	Local	10am to 3pm	6.9	Q44	LTD	7pm to Mid	10.5
Q20B	Local	3pm to 7pm	6.2	Q46	Local	Mid to 6am	16.4
Q20B	Local	7pm to Mid	8.5	Q46	Local	6am to 10am	12
Q25	Local	Mid to 6am	10.2	Q46	Local	10am to 3pm	11.4
Q25	Local	6am to 10am	7.3	Q46	Local	3pm to 7pm	10.7
Q25	Local	10am to 3pm	7.1	Q46	Local	7pm to Mid	13.3
Q25	Local	3pm to 7pm	6.9	Q46	LTD	6am to 10am	13.2
Q25	Local	7pm to Mid	8	Q46	LTD	3pm to 7pm	12.4
Q25	LTD	6am to 10am	8.2	Q46	LTD	7pm to Mid	13.2
Q25	LTD	3pm to 7pm	7.6	Q48	Local	Mid to 6am	14.3
Q26	Local	6am to 10am	8.9	Q48	Local	6am to 10am	11.6
Q26	Local	3pm to 7pm	8.8	Q48	Local	3pm to 7pm	9.5
Q27	Local	Mid to 6am	13.6	Q58	Local	Mid to 6am	10.5
Q27	Local	6am to 10am	9	Q58	Local	6am to 10am	7.3
Q27	Local	10am to 3pm	9.5	Q58	Local	10am to 3pm	6.8
Q27	Local	3pm to 7pm	9.4	Q58	Local	3pm to 7pm	6.4
Q27	Local	7pm to Mid	11.1	Q58	Local	7pm to Mid	8.6
Q27	LTD	6am to 10am	10am	Q58	LTD	6am to 10am	8.7
Q27	LTD	3pm to 7pm	10.4	Q58	LTD	10am to 3pm	8.3
Q27	LTD	7pm to Mid	11.1	Q58	LTD	3pm to 7pm	7.7
Q28	Local	Mid to 6am	12.6	Q65	Local	Mid to 6am	10.5
Q28	Local	6am to 10am	9.3	Q65	Local	6am to 10am	7.6
Q28	Local	10am to 3pm	9	Q65	Local	10am to 3pm	7.2
Q28	Local	3pm to 7pm	9.2	Q65	Local	3pm to 7pm	7.6
Q28	Local	7pm to Mid	10.5	Q65	Local	7pm to Mid	8.9
Q31	Local	6am to 10am	9.5	Q65	LTD	6am to 10am	8.3
Q31	Local	10am to 3pm	8.6	Q65	LTD	3pm to 7pm	8
Q31	Local	7pm to Mid	10.7	Q66	Local	Mid to 6am	10.7
Q32	Local	6am to 10am	6.3	Q66	Local	6am to 10am	8.2
Q32	Local	10am to 3pm	5.8	Q66	Local	10am to 3pm	7.6
Q32	Local	3pm to 7pm	5.5	Q66	Local	3pm to 7pm	7.8

Q32	Local	7pm to Mid	7.9	Q66	Local	7pm to Mid	8.5
Q34	Local	6am to 10am	8.6	Q76	Local	6am to 10am	11.1
Q34	Local	10am to 3pm	7	Q76	Local	10am to 3pm	10.5
Q34	Local	3pm to 7pm	6.8	Q76	Local	3pm to 7pm	10.7
Q34	Local	7pm to Mid	7.9	Q76	Local	7pm to Mid	12.2
Q36	Local	Mid to 6am	13.4	Q88	Local	6am to 10am	11.5
Q36	Local	6am to 10am	9.9	Q88	Local	10am to 3pm	11.1
Q36	Local	10am to 3pm	9.9	Q88	Local	3pm to 7pm	10.8
Q36	Local	3pm to 7pm	9	Q88	Local	7pm to Mid	13.3

Table C-3. Bus Shelters in Northeast Queens by Route

Bus Stop Shelters By Route	Number Of Shelters	Number Of Bus Stops	Percent Of Bus Stops With Bus Shelter
Q12	19	84	22.6%
Q13	25	94	26.6%
Q15	11	62	17.7%
Q15A	8	67	11.9%
Q16	19	92	20.7%
Q17	31	103	30.1%
Q19	7	59	11.9%
Q20A/B	43	144	29.9%
Q25	37	113	32.7%
Q26	7	54	13.0%
Q27	28	150	18.7%
Q28	20	75	26.7%
Q30	26	115	22.6%
Q31	17	124	13.7%
Q34	43	97	44.3%
Q36	23	137	16.8%
Q42	29	98	29.6%
Q44	47	139	33.8%
Q46	40	114	35.1%
Q48	9	55	16.4%
Q50	25	56	44.6%
Q58	36	115	31.3%
Q64	10	36	27.8%
Q65	29	111	26.1%
Q66	32	83	38.6%
Q76	27	129	20.9%
Q88	32	130	24.6%
QM1	19	47	40.4%
QM2	21	57	36.8%
QM3	21	55	38.2%
QM4	15	53	28.3%
QM5	29	94	30.9%
QM6	26	69	37.7%
QM7	19	49	38.8%
QM8	29	94	30.9%
QM20	23	57	40.4%
X68	14	41	34.1%

Source: DOT Bus Stops with Active Shelters, October 2014

Table C-4. “Not in Service” Buses by Route

Route	WEEKDAY	SUNDAY	SATURDAY
Q1	1.4%	2.8%	1.1%
Q12	1.4%	0.4%	1.0%
Q13	1.7%	3.1%	4.0%
Q15	0.7%	0.1%	3.6%
Q15A	1.0%	0.0%	3.7%
Q16	1.4%	0.7%	3.9%
Q17	3.1%	1.1%	1.0%
Q19	1.0%	0.5%	0.1%
Q20A	1.0%	0.3%	1.5%
Q20B	0.9%		
Q25	2.5%	2.1%	1.0%
Q26	0.9%		
Q27	2.4%	1.5%	0.8%
Q28	1.8%	1.1%	0.4%
Q30	2.5%	0.9%	0.8%
Q31	2.0%	0.7%	0.3%
Q34	1.9%		
Q36	1.3%	0.8%	0.4%
Q43	2.2%	1.3%	0.4%
Q44	2.4%	5.1%	5.7%
Q46	2.4%	1.1%	0.4%
Q48	1.1%	1.8%	3.1%
Q50	1.1%	0.9%	0.2%
Q58	0.9%	1.8%	1.6%
Q64	4.0%	2.4%	0.2%
Q65	1.5%	0.5%	1.0%
Q66	1.9%	0.9%	2.9%
Q76	2.4%	0.5%	1.2%
Q88	3.6%	3.4%	1.5%

Ridership

Figure C-1. Overnight Bus Boarding

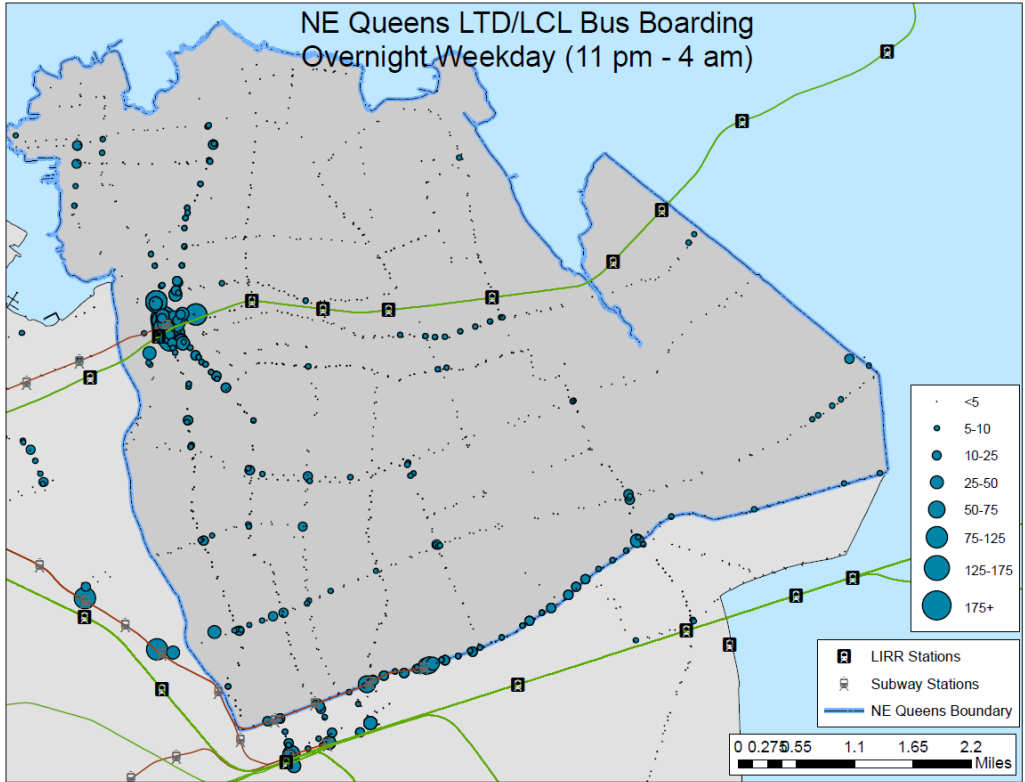


Figure C-2. Overnight Bus Alighting

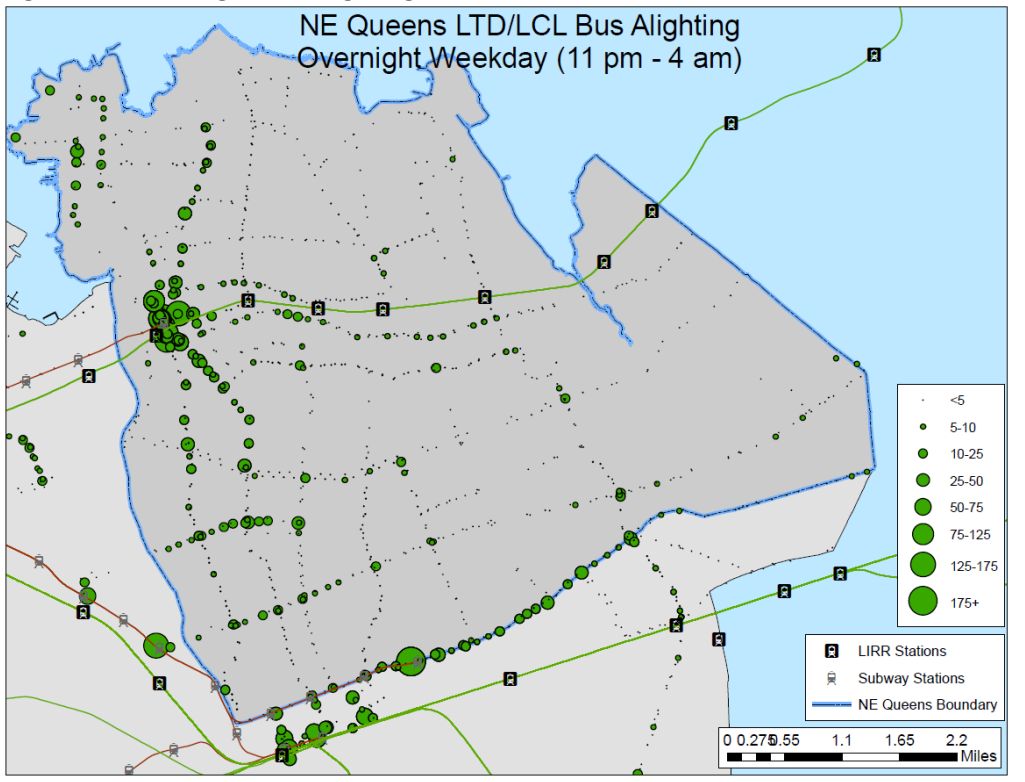


Table C-5. Bus to Subway Transfers: Stations with >100 Transfers

Subway Station	Weekday NE Queens Bus Route To Subway Transfers
Flushing-Main St (7)	26,919
Kew Gardens-Union Turnpike (E, F)	5,965
Jamaica-179 St (F)	5,932
Forest Hills-71 Av (E, F, M, R)	3,992
Grand Av-Newtown (M, R)	3,722
Jamaica Center-Parsons-Archer (E, J, Z)	1,670
169 St (F)	1,387
Sutphin Blvd-Archer Av-JFK Airport (E, J, Z)	1,277
Northern Blvd (M, R)	1,220
Woodhaven Blvd (M, R)	831
Parsons Blvd (F)	782
Parkchester (6)	747
Myrtle-Wyckoff Aves (L, M)	551
Pelham Bay Park (6)	481
Astoria Blvd (N, Q)	406
21 St-Queensbridge (F)	260
Queens Plaza (E, M, R)	242
West Farms Sq-East Tremont Av (2, 5)	242
111 St (7)	230
Fresh Pond Rd (M)	210
East 180 St (2, 5)	180
Sutphin Blvd (F)	170
Briarwood-Van Wyck Blvd (E, F)	140
103 St-Corona Plaza (7)	123

Table C-6. Bus To Bus Transfers with >225 Transfers

1st Bus	2nd Bus	Weekday Transfers	Within NE Queens
Q46	Q27	961	True
Q27	Q46	945	True
Q44	Q20A	676	True
Q27	Q43	589	True
Q20A	Q44	552	True
Q43	Q27	513	True
Q53	Q58	395	False
Q17	Q46	387	True
BX9	Q44	380	False
Q23	Q58	367	False
BX12	Q50	360	False
Q46	Q17	359	True
Q58	Q23	358	False
Q44	Q46	352	True
Q58	Q53	345	False
Q44	Bx9	340	False
Q31	Q27	338	True
Q50	Bx12	338	False
BX36	Q44	317	False

Q17	Q30	317	True
Q46	Q10	316	False
Q30	Q27	314	True
Q17	Q88	313	True
Q46	Q44	312	True
Q88	Q30	306	True
Q30	Q17	305	True
Q88	Q17	303	True
Q44	Bx36	302	False
Q59	Q58	301	False
Q17	Q25	300	True
Q34	Q25	299	True
Q10	Q46	297	False
Q27	Q88	296	True
Q44	Bx39	295	False
Q17	Q65	288	True
Q58	Q59	286	False
Q27	Q58	285	True
Q77	Q27	285	False
Q30	Q88	283	True
Q58	Q27	282	True
Q58	Q44	282	True
Q27	Q30	276	True
Q27	Q25	275	True
Q27	Q77	273	False
Q44	Q58	273	True
Q25	Q34	272	True
Q30	Q46	271	True
Q66	Q44	267	True
Q25	Q17	265	True
Q27	Q4	263	False
Q25	Q27	260	True
Q65	Q17	260	True
Q27	Q31	259	True
Q46	Q65	259	True
Q58	Q88	259	True
Q44	Q27	256	True
Q88	Q27	254	True
Q46	Q30	253	True
Q60	Q58	251	False
Q44	Bx22	243	False
Q44	Q66	243	True
Q46	Q88	243	True
Q27	Q65	242	True
Q58	Q60	242	False
Q76	Q46	235	True
Q4	Q27	233	False
Q28	Q13	232	True
Q43	Q111	232	False
Q88	Q58	232	True
Q25	Q65	232	True
Q27	Q44	231	True
Q65	Q27	227	True

Q46	Q20A	226	True
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Origins and Destinations

Table C-7. Average Trip Length – NYCT Buses only

Route	Weekday Average Trip Length
Q1	4.71
Q12	2.14
Q13	2.28
Q15	2.56
Q16	2.54
Q17	2.51
Q17LTD	3.46
Q20A	2.46
Q20B	1.55
Q26	1.79
Q27	3.17
Q27LTD	4.91
Q28	2.21
Q30	3.28
Q31	3.31
Q36	2.81
Q36LTD	2.48
Q43	2.58
Q43LTD	2.41
Q44	3.44
Q44LTD	3.64
Q46	2.70
Q46LTD	3.71
Q48	2.66
Q58	2.26
Q58LTD	2.44
Q76	3.30
Q88	3.42

Table C-8. Q12 Origin-Destination Matrix

Neighborhood Origin Or Destination	Auburndale	Bayside-Bayside Hills	Douglaston-Little Neck	East Flushing	Flushing	Murray Hill	Grand Total
Auburndale	18	136	91	92	701	25	1063
Bayside-Bayside Hills		202	428	168	1157	174	2129
Douglaston-Little Neck			76	110	660	108	954
East Flushing				85	1903		1988
Flushing					1297	182	1478
Murray Hill						82	82
Grand Total	18	339	594	455	5717	572	7695

Figure C-3. Q12 Origin-Destination Web

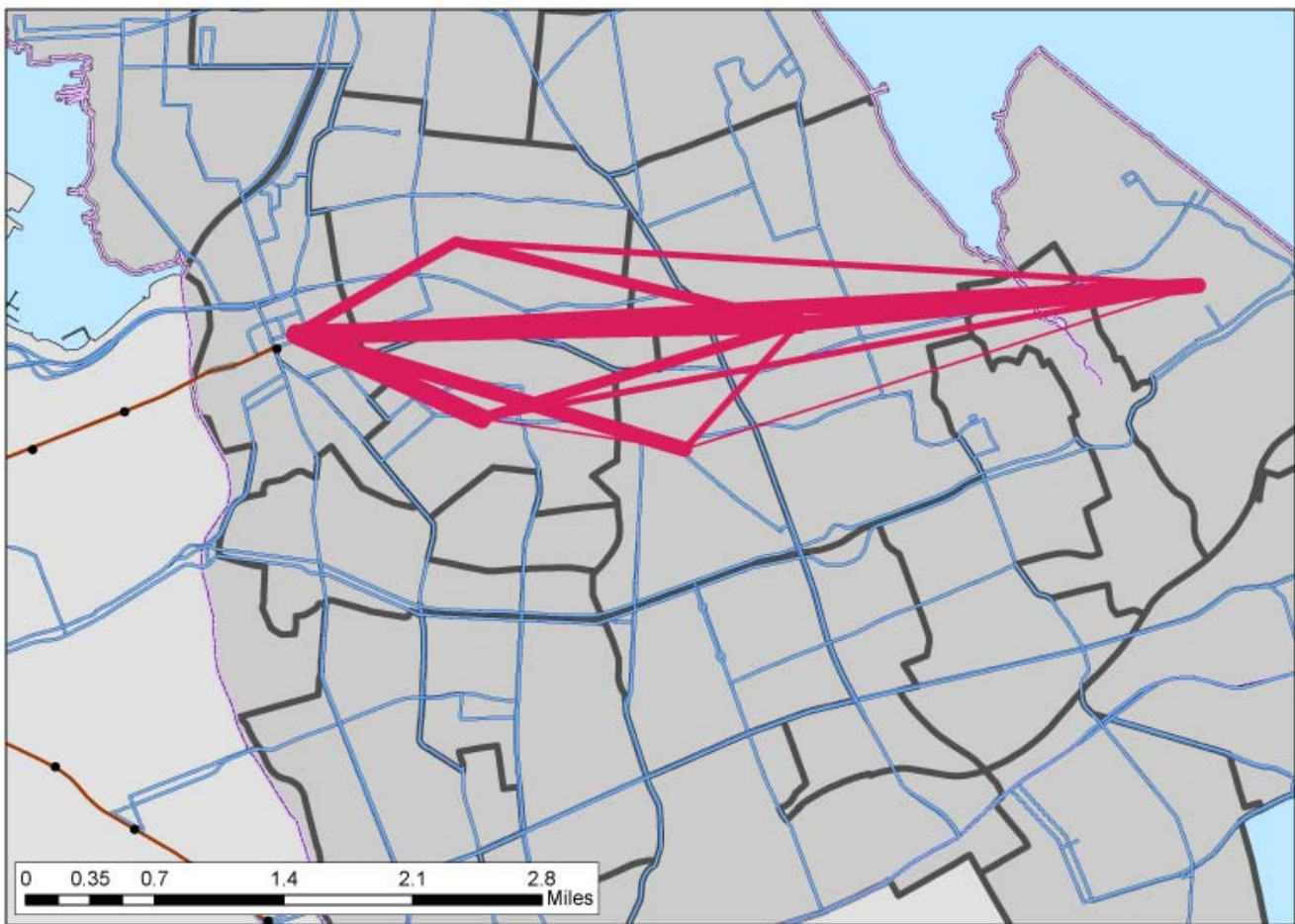


Table C-9. Q17 Origin-Destination Matrix

Neighborhood Origin or Destination	Auburn- dale	Briarwood- Jamaica Hills	East Flushing	Flushing	Fresh Meadows -Utopia	Jamaica Estates- Hollis- wood	Pomonok- Flushing Heights- Hillcrest	Queens- boro Hill	Grand Total
Auburndale	13	28	82	713	40	117		202	1196
Briarwood- Jamaica Hills		113	17	435	435	497	67	83	1647
East Flushing			23	770	59	113		151	1116
Flushing				3411	2433	2035	1184	2809	11873
Fresh Meadows- Utopia					212	1542	326	353	2432
Jamaica Estates- Holliswood						1086	269	502	1858
Pomonok- Flushing Heights-Hillcrest							60	81	142
Queensboro Hill								138	138
Grand Total	13	141	122	5329	3180	5391	1907	4319	20402

Figure C-4. Q17 Origin-Destination Web

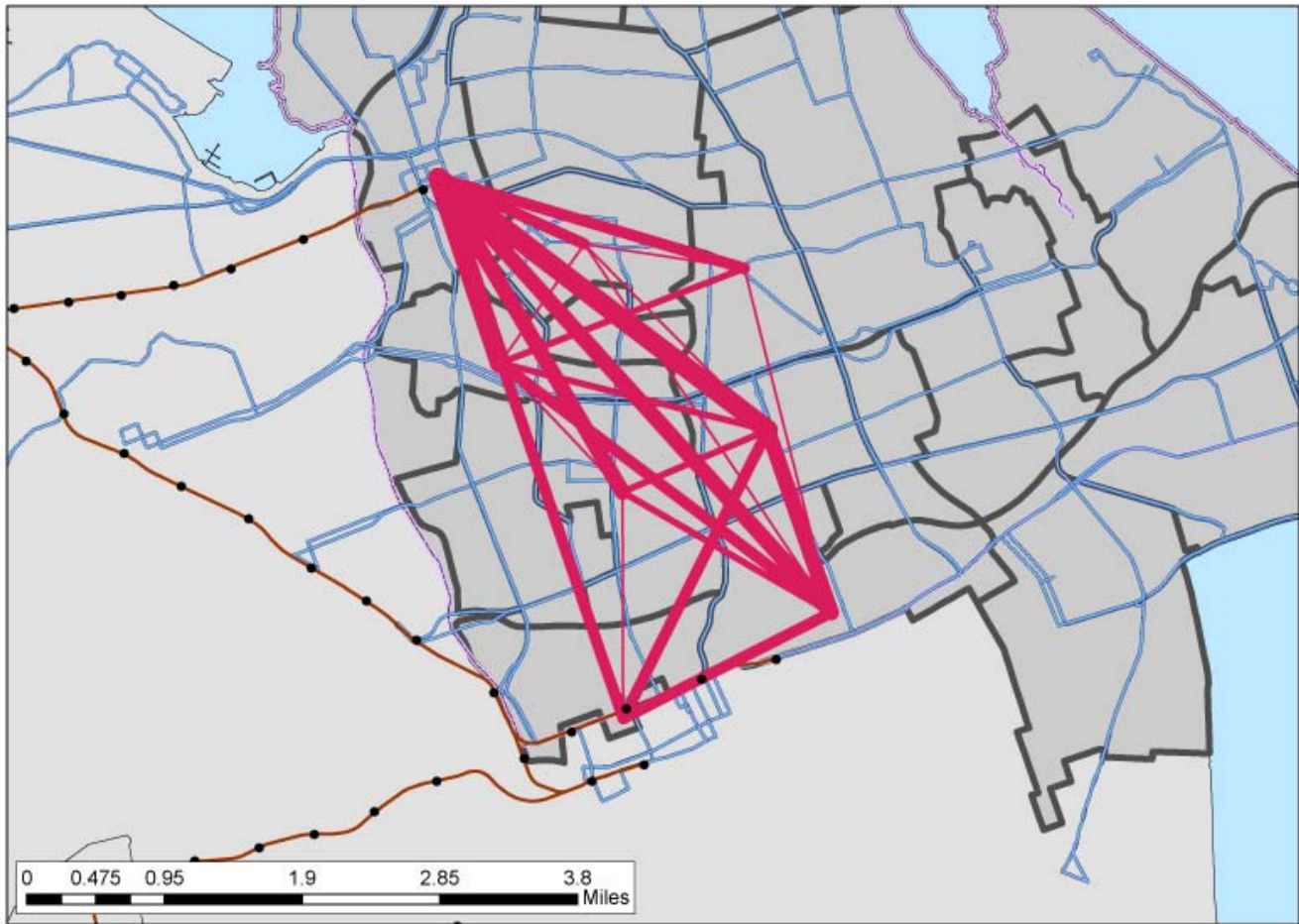


Table C-10. Q27 Origin-Destination Matrix

Neighborhood Origin Or Destination	Auburndale	Bayside- Bayside Hills	Bellerose	East Flushing	Flushing	Oakland Gardens	Queens Village	Grand Total
Auburndale	30	130	19	163	1153	209	122	1826
Bayside-Bayside Hills		300	88	480	4295	954	1232	7349
Bellerose			8	29	228	335	599	1199
East Flushing				165	2741	574	246	3726
Flushing					2521	5351	1849	9722
Oakland Gardens						927	3287	4214
Queens Village							2335	2335
Grand Total	30	430	115	837	10938	8351	9670	30371

Figure C-5. Origin-Destination Web

