

Background: Transport To and From NY's Airports

New York City is the home of the nation's largest Central Business District, which includes multinational companies and global economic functions. However, the City's airports (LaGuardia and JFK) provide far more limited airport access options in comparison to global competitors such as London (Heathrow Express (15 min from Airport direct to CBD), Frankfurt (10 min), Hong Kong (24 min) and Shanghai (7 minutes). NYC travel options to the airports are primarily road-based, and travel times can be slow and unreliable during peak travel periods. The existing AirTrain rail link which serves over 15,000 customer trips per day to JFK requires a transfer from either LIRR or subway services from Manhattan. A key goal of the Airport Vision is to reduce travel times and eliminate transfers to make airport accessibility more convenient and reliable for air travelers and airport employees.

LaGuardia Airport

Background

LaGuardia Airport is 9 miles east of the Manhattan CBD and is linked by area highways and river crossings. LaGuardia is surrounded by several dense residential neighborhoods including Astoria (to the west, separated by local streets) and Jackson Hts. (to the south, separated by limited access highways). To the north is Bowery Bay, Rikers Island and the Long Island Sound.

Neighborhood	Population	Density/Sq Mile
Steinway	53,604	23,620
Jackson Heights	113,327	63,863
East Elmhurst	20,887	34,092 ¹
Astoria	89,116	56,083

The predominant mode of ground access is taxi, car service and private automobile. Express bus service is provided from Manhattan origin points, and local bus services (including MTA's enhanced SBS and Limited bus options require a connection from LIRR or subway services). Approximate travel times are:

- Taxi/Car Service/Express Bus: 16 minutes (optimal); 40 minutes (congested)
- Subway + bus: 38 minutes (optimal); 48 minutes (congested)

¹ East Elmhurst is less than one square mile in area

Subway Connectivity: Subway service in the vicinity of LaGuardia Airport is provided in three corridors: the Astoria line (N/Q trains), the Queens Blvd line (E/F/M/R trains) and the Flushing line (7 train). Trains operate 24 hours a day with service frequencies of 13-30 trains per hour during peak travel periods. Plans are in place to increase train capacity by approximately 10% through introduction of Communications-based Train Control (CBTC). Peak hour ridership levels overall are high (89% of capacity on the Astoria line; 95% of capacity on the Queens Blvd express line; 59% of capacity on the Queens Blvd local line and 81% of capacity on the Flushing local line). Train lengths on the E F N Q and R trains are 600 feet (10-60 foot cars or 8-75 foot cars); on the M train, 480 feet (8-60 foot cars) and on the 7 train, 561 feet (11-51 foot cars).

LaGuardia is located 3 miles east of the Astoria line Ditmars Blvd station, 3 miles north of the Queens Blvd/Flushing 74th St-Roosevelt Ave station, and 2 miles west of the Flushing line 111th St station (7 train). The Ditmars Blvd and 111th St stations are elevated, while the 74th St-Roosevelt Ave station (Queens Blvd portion) is underground.

LIRR Connectivity: The Long Island Rail Road provides service in two corridors in the vicinity of LaGuardia Airport: the 4-track Main Line between Sunnyside Yard and Jamaica, and the two-track Port Washington Branch which diverges from the Main Line at Woodside. All trains currently operate to Penn Station in Manhattan, or to Hunterspoint Ave or Long Island City in Queens. Beginning in 2023, an additional rail line ("East Side Access") will provide a new link between the Manhattan CBD (from Grand Central Terminal (GCT) and Sunnyside Yard. Trains operate approximately 21 hours per day. During peak travel periods, 26-32 trains per hour are scheduled on the Main line and 8 trains/hour are scheduled on the Port Washington Branch, with a total of 33-38 trains/hour entering and leaving Penn Station. Peak hour ridership levels are high (75-80% of capacity on the Main line; 71-87% of capacity on the Port Washington branch). Average train length is 10 cars (850 feet).

LaGuardia Airport is 5 miles east of Sunnyside Yard, 3 miles north of the Woodside Station and 4 miles west of the LIRR Mets-Willets Pt Station. All stations are at grade level. All trains currently operate to Penn Station in Manhattan, or to Hunterspoint Ave or Long Island City in Queens; trains from both corridors will serve GCT when East Side Access opens.

Programmatic Goals

- Provide direct access for travelers from Manhattan CBD (Penn Station or GCT) to the LGA Central Terminal within 30 minutes
- Provide linkage between Airport and non-CBD regional transit network (subway and LIRR) for travelers and airport employees

Possible Rail Access Corridors

Previous studies of airport access have identified (at a sketch level only) the following corridors:

- A northern extension of the Astoria line from Ditmars Blvd station via local streets to the Con Ed generating plant, then east via local streets to the Airport property (in the vicinity of the Marine Air Terminal)
- An eastern branch from the Astoria line at Astoria Blvd station via the Grand Central Parkway to the Airport Property (in the vicinity of the Central Terminal Building)
- A northern branch from the Queens Blvd line at 74th St-Roosevelt Ave station via the Brooklyn-Queens Expwy to the Airport Property (in the vicinity of the Central Terminal Building)
- A northern branch from the Flushing line 111th St station via the Grand Central Pkwy to the Airport Property (in the vicinity of Terminal D)
- A new LIRR service branch from Sunnyside Yard via the Amtrak Hell Gate line and the Brooklyn-Queens Expwy to the Airport Property (in the vicinity of the Central Terminal Building)
- A northern branch from the LIRR Main line at Woodside station via the Brooklyn-Queens Expwy to the Airport Property (in the vicinity of the Central Terminal Building)
- A western branch from the LIRR Port Washington branch east of Mets-Willets Pt station via the Grand Central Pkwy to the Airport Property (in the vicinity of the Terminal D)

Conceptually, these corridors could invoke a direct connection providing one-seat subway service to the Manhattan CBD or an AirTrain-type shuttle providing a two-seat connection between the airport at a Queens station.

JFK Airport

Background

JFK Airport is 15 miles southeast of the Manhattan CBD and is linked by area highways and river crossings. JFK is surrounded by several residential neighborhoods including Howard Beach (to the west, separated by the NYCT Fulton St line) and Ozone Park and South Jamaica (to the north, separated by limited access highways). To the south is Jamaica Bay, the Rockaway Peninsula and the Atlantic Ocean. Neighborhood population densities are shown below.

Neighborhood	Population	Density/Sq Mile
South Ozone Park	78,906	24,170
Lindenwood - Howard Beach	28,121	11,257
Ozone Park	21,052	23,777

The predominant mode of ground access is taxi, car service and private automobile. Express bus service is provided from Manhattan origin points, and local bus services (including MTA's enhanced SBS and limited bus options require a connection from LIRR or subway services). Approximate travel times are:

- Taxi/Car Service/Express Bus: 25 minutes (optimal); 60 minutes (congested)
- Subway + AirTrain: 38 minutes
- LIRR + AirTrain: 65 minutes

Subway Connectivity: Subway service in the vicinity of JFK Airport is provided in three corridors: the Queens Blvd express line (E train); the Jamaica line (JZ trains) and the Fulton Street line (A train). Trains operate 24 hours a day with service frequencies of 12-30 trains per hour during peak travel periods. Plans are in place to increase train capacity by approximately 10% through introduction of Communications-based Train Control (CBTC). Peak hour ridership levels are high (67% of capacity on the Fulton St line; 95% of capacity on the Queens Blvd express line and 79% of capacity on the Jamaica line). Train lengths on the A and E trains are 600 feet (10-60 foot cars); and on the JZ trains, 480 feet (8-60 foot cars).

JFK Airport is 4 miles south of the NYCT Sutphin Blvd-JFK station (EJZ trains) and 3 miles east of the NYCT Howard Beach station (A train). Both stations are served by the existing AirTrain system, which has been designed to support a potential track connection to the Fulton St A subway line. Rail vehicles

operating on both the LIRR and the AirTrain systems must address the respective grade, curve, crash-worthiness and operational difference between the two systems.²

LIRR Connectivity: The Long Island Rail Road provides service in two JFK corridors, the 4-track Main Line to Manhattan and the 2-track Atlantic Branch to Downtown Brooklyn, which merge at Jamaica Station, and then split into multiple branches serving Nassau and Suffolk Counties. All Main line trains currently operate to Penn Station in Manhattan, or to Hunterspoint Ave or Long Island City in Queens. Beginning in 2023, an additional rail line (“East Side Access”) will provide a new link between the Manhattan CBD (from Grand Central Terminal (GCT) and the Main line. Today, trains operate approximately 21 hours per day. During peak travel periods, 26-32 trains are scheduled per hour on the Main line and 9 trains/hour are scheduled on the Atlantic Branch, with a total of 33-38 trains/hour entering and leaving Penn Station. Peak hour ridership levels are moderate to high (75-80% of capacity on the Main line; 45-56% of capacity on the Atlantic branch). Average train length is 10 cars (850 feet).

JFK Airport is 4 miles south of the LIRR Jamaica Station, and is linked by the existing AirTrain system, which has been designed to support a connection to either the Main Line or the Atlantic Branch. AirTrain serves over 15,000 customers per day.

Programmatic Goals

- Provide access for travelers from Manhattan CBD (Penn Station or GCT) to the JFK Terminal area within 30 minutes
- Provide linkage of proposed “Airport City” to regional transit network (subway and LIRR) for employees and visitors, potentially via inclusion of in infill stations on AirTrain.

Possible Access Corridors

Previous studies of airport access have identified the following corridors:

- A direct connection of the AirTrain system to the NYCT Fulton Street line at Howard Beach and travel via a “hybrid” rail vehicle that can negotiate both systems.
- A direct connection of the AirTrain system to the LIRR Main Line or Atlantic Branch at Jamaica and travel via a “hybrid” rail vehicle that can negotiate both systems (feasibility not confirmed).

² To be confirmed by Port Authority



