Chapter 2:
Airport and Long Island Commuter Access

Improved access to the region's airports and Long Island is critical to the continued competitiveness of New York City and the long-term economic vitality of Lower Manhattan. For centuries, New York has been a leader in international commerce, and as the global economy continues to develop, Lower Manhattan's transportation infrastructure must keep pace. Airports are now key components in the global economy both for trading goods and for professional services transactions. Governor Pataki's 1996 *Master Links* strategy and Mayor Bloomberg's *Vision* have previously identified airport access as New York City's highest transportation priority and the most important initiative in preserving the city's role as the premiere commercial center in the global economy. Equally important investments to access John F. Kennedy International Airport can be leveraged to provide access for Long Island, one of the area's fastest growing regions and a critical labor pool. Analysis shows that improved Long Island commuter access has the potential to double the working age population living within a 60-minute commuting distance from Lower Manhattan within 20-25 years.[1]

Air transport is playing an increasingly critical role in facilitating international business. By enabling the global movement not only of products, but also of people, air transport brings "business managers together, enabling them to build the links, communications and personal relationships necessary to achieve … a [high] level of international business activity."[2] Indeed, businesses and hotels that generate and/or attract air travelers have a strong interest in continuous improvements in airport access. They will tend to locate in places where access to the airports is most convenient. Therefore, cities that are able to make easy, reliable connections between airports and centers of business have major competitive advantages over those cities that are unable to make such connections.

To maintain New York's position as a world leader, the trip to and from airports must be made friendlier, faster, and more efficient. The key is to create such an attractive new system to the airports that it will successfully entice an abundance of new users. The geographic location and transit capacity of Lower Manhattan offers an opportunity to create these types of connections to all three major airports in the region and, in particular, a quick, reliable, direct connection to JFK International Airport, the region's primary international gateway.

KEY GOALS FOR AIRPORT AND LONG ISLAND COMMUTER ACCESS

An effective airport and Long Island access system should provide:

- Travel times that are superior to automobiles and taxis or current mass transit service
- Reliable, regular, and inexpensive service
- A high level of comfort and convenience
  - Available, comfortable seats
  - A trip with minimal or no transfers
  - Clear wayfinding and signage with readily available information

For Airport Access

- Capacity to check baggage and/or room for storing luggage on vehicles
- Separation from commuter crowding, especially during weekday rush hours
- Preferably a direct, one-seat ride to the airport

For Long Island Access

- Convenient station location near places of work
- Connections to LIRR service and other transit lines

Table 2.1

International Airport/Rail Link Precedents[3]

City/Airport	Destination	Baggage Check-In	Mode of Travel	Frequency Peak/Off-Peak		One-Seat Ride?	Direct to Airport Terminal?	Travel Time*	Cost#
Amsterdam/Schiphol	Amsterdam Central Station	No	Train	6 min	10 min	Yes	Yes	19 min	$3.10 second class $5.00 first class
London/Heathrow	Paddington Station	Yes	Heathrow Express	15 min	15 min	Yes	Yes	15 min	$20.50 standard $33.00 first class
London/Gatwick	Victoria Station	No	Non-Stop Train	15 min	30 min	Yes	Yes	30 min	$17.00 express class $28.00 first class
Paris/Charles de Gaulle	Gare du Nord	No	Regional Express Rail (RER)	15 min	15 min	Yes	Yes	35 min	$8.00 standard
Tokyo/Haneda	Hamamat-suscho Station	No	Tokyo Monorail	5 min	5 min	Yes	Yes	22 min	Up to $4.00
Hong Kong/Chek Lap Kok	Central Hong Kong Rail Station	Yes	Dedicated Direct Rail	10 min	10 min	Yes	Yes	23 min	$13.00
Frankfurt/Frankfurt International	Frankfurt Central Station in Downtown Frankfurt	No	S-Bahn (Regional Commuter Rail)	5-10 min	15 min	Yes	Yes	11-13 min	$3.50
Frankfurt/Frankfurt International	Frankfurt Central Station in Downtown Frankfurt	No	ICE (InterCity Express)	30 min	30 min	Yes	Yes	11 min	$12.00
Chicago/O'Hare International	Downtown Chicago	No	Subway	8 min	10 min	Yes	Yes	45 min	$1.50
Washington, D.C./Reagan National Airport	Downtown Washington D.C.	No	Subway	6-8 min	10-12 min	Yes	Yes	20 min	$3.25
Atlanta/Hartsfield International	Five Points Station in Downtown Atlanta	No	Rapid Transit	8 min	8 min	Yes	Yes	16 min	$1.75

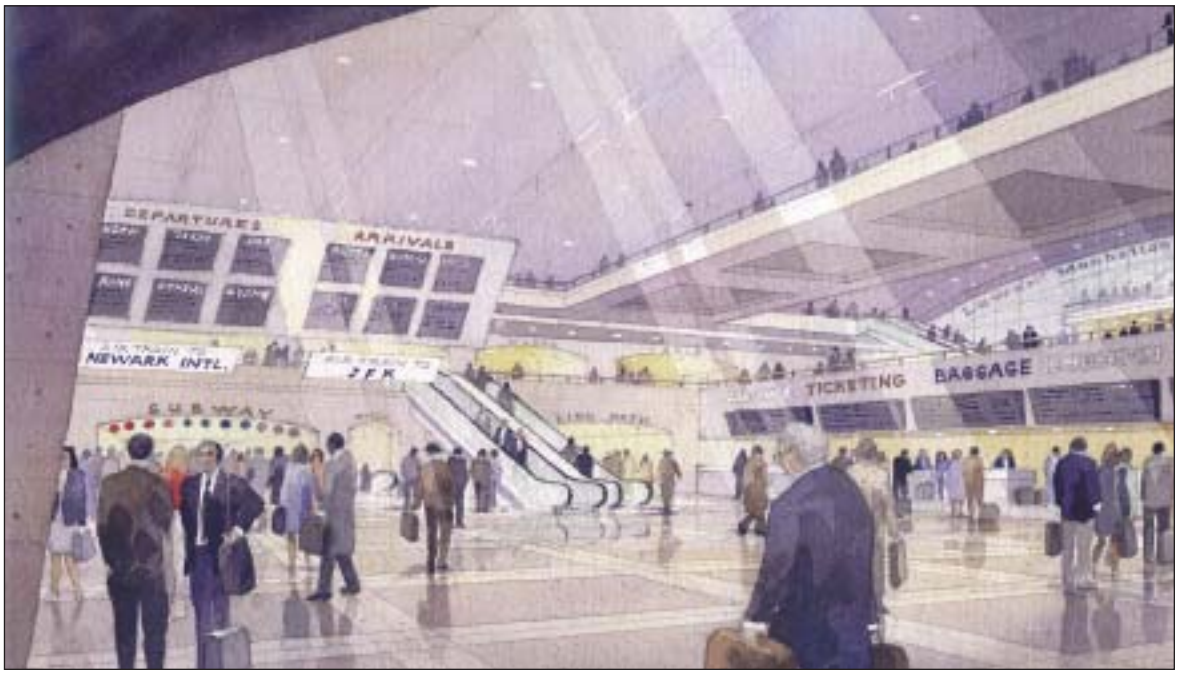
* Travel time is calculated from the Airport to the designated destination in the "Destination" column.

All foreign costs were calculated based on available exchange rate information.

As shown in Table 2.1, London, Tokyo, Hong Kong, and Chicago are just a few of the cities that already provide one-seat rides from central business districts to international airports. Such services are often paired with direct commuter rail. Both London and Hong Kong already have facilities for baggage check-in at the central city.

In contrast to our global counterparts, current access to the airports from Lower Manhattan is inconvenient, time-consuming, unreliable, and often expensive. Travel to the JFK terminals from Lower Manhattan by public transportation currently requires 70 to 80 minutes and at least one change in mode of transportation.[4] When the AirTrain JFK begins service, travel time via mass transit will still average 61 to 65 minutes. On the other hand, a trip to the airport by automobile, taxi, or bus is unpredictable and can take well over an hour, being subject to some of the most crowded traffic conditions in the New York metropolitan region.

Within the mass transit system, air traveler amenities are poor. Most downtown subway stations contain no escalators or elevators, and turnstiles and stairs are difficult for passengers with luggage to negotiate. Subways and buses are crowded throughout the day and also do not provide luggage storage. For these and a number of other reasons, only 5.5%[5] of Lower Manhattan air passengers travel to the airport by mass transit. By comparison, 41% of passengers traveling to London's Heathrow Airport and 59% of passengers traveling to Hong Kong International Airport make their trip via mass transit. A major goal for Lower Manhattan should be to significantly increase the number of air travelers traveling to the airports by mass transit. The most logical way to accomplish this goal is to adopt a system that provides convenience while at the same time allows the most number of people to access the airports.



Lower Manhattan has the potential to become the airport access hub for the New York metropolitan region.

Going forward, Lower Manhattan is in a position to match or surpass these other central business districts by offering airport access not only to one, but to three national and international airports. The distance from Lower Manhattan to Newark Liberty International Airport, LaGuardia Airport, and JFK is relatively short, and recent investments have provided improved airport connections. These include the AirTrain Newark, which is already in service to the Newark Airport rail station and from which Amtrak and New Jersey Transit provide regional rail connections to midtown Manhattan and Newark Penn Station (PATH will re-connect Lower Manhattan to Newark Penn Station when World Trade Center service re-opens later this year). By year's end, another project, the AirTrain JFK, will bring air passengers either to the newly refurbished Jamaica Station, accessible by the LIRR and the J, Z, and E subway lines, or to Howard Beach Station accessible to the A subway line.

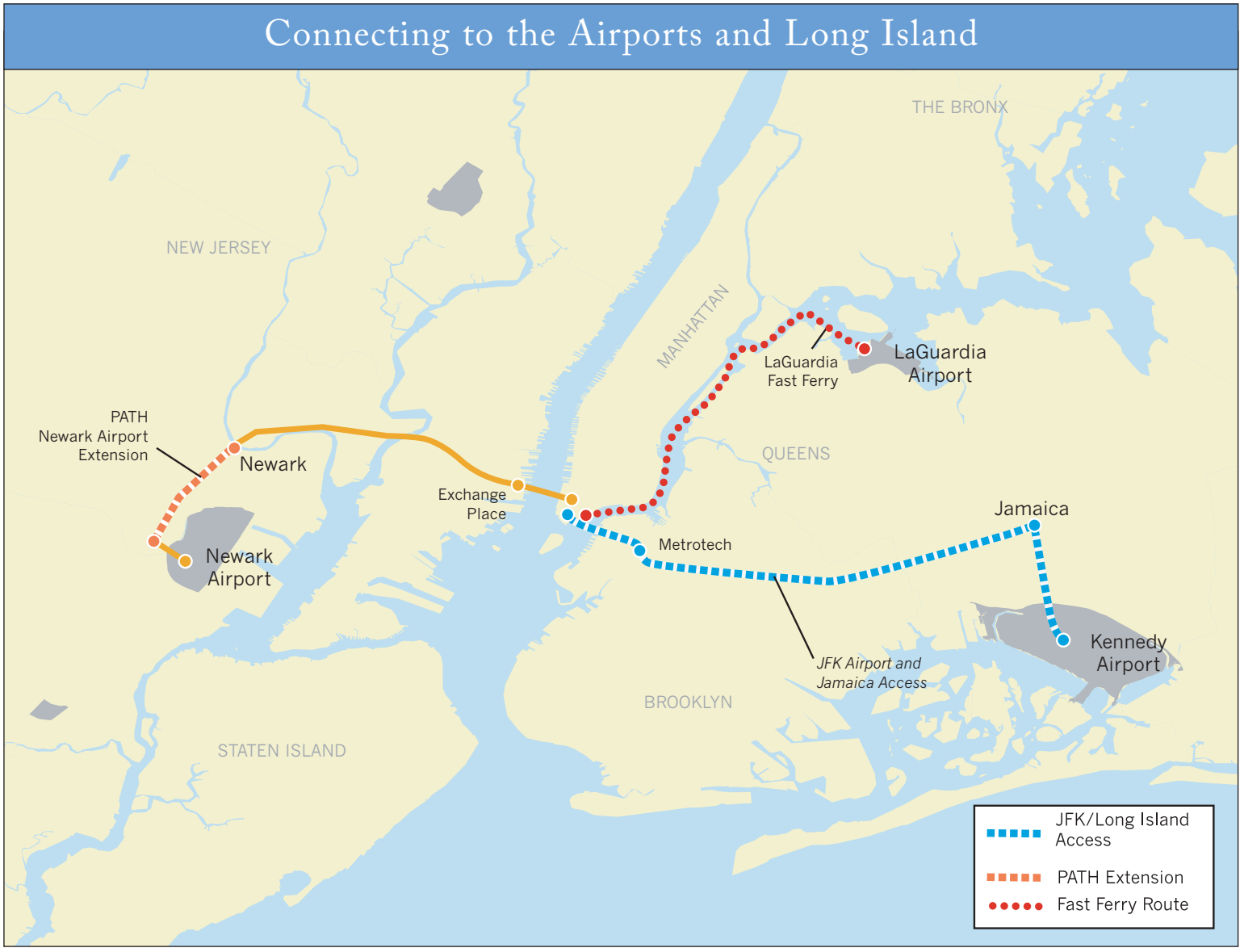
These measures are a first step forward for the region in providing more convenient and efficient airport access. As previously noted, current travel times for Lower Manhattan passengers are long, convenience is limited, and passenger experience is poor. However, building upon existing and planned systems, new investment can make Lower Manhattan the major airport center for the region, with service to all three major airports from a grand arrival and departure facility in the heart of downtown. The infrastructure investments required for airport access would also provide improved commuter access, thus addressing two of the region's most pressing transportation needs at once. The following chart outlines some of the options proposed to achieve these goals.

Airport Access and Commuter Alternatives[6]

Newark Liberty Airport to Lower Manhattan				
Existing	Time to Airport (min)	One seat-ride to Airport?		
AirTrain to NJ Transit and transfer to PATH at Newark	50	N		
Enhancement Options	Time to Airport (min)	One seat-ride to Airport?	Cost to Implement	Time to Implement (yrs)
PATH Extension to Newark International Airport Rail Station	38	N	$525 million	7-8

JFK International Airport and Jamaica Station to Lower Manhattan				
Existing (via AirTrain JFK-opening late 2003)	Time to Airport (min)	One seat-ride to Airport?		
LIRR from Jamaica to Atlantic & subway	64	N		
LIRR from Jamaica to Penn & subway	65	N		
A Train via Howard Beach	61	N		
Preliminary Models for Enhancement	Time to Airport (min)	One seat-ride to Airport?	Cost to Implement	Time to Implement (yrs)
Super Shuttle	38	N	$2.0 to 2.3 billion	5
JFK Direct	23	Y	$4.7 to 5.3 billion	10 (5 for initial phase)

LaGuardia Airport to Lower Manhattan				
Existing	Time from Airport (min)	One seat-ride from Airport?		
M60 Bus to Lexington Avenue Subway	68	N		
Enhancement Options	Time to Airport (min)	One seat-ride to Airport?	Cost to Implement	Time to Implement (yrs)
Fast Ferry to New LaGuardia Ferry Landing	37	N	$3 to 6 million	1



Lower Manhattan has the potential for fast and reliable access to all three area airports and Long Island.

Newark Liberty International Airport

Once PATH service is restored to Lower Manhattan, customers traveling to Newark Liberty International Airport will be able to take PATH to Newark Penn Station, proceed to a NJ Transit train for a one-stop trip to the Newark Liberty International Airport Rail Link station, and board the AirTrain to reach the airport terminals. However, under this scenario, the trip will require two transfers en route.

Travel to Newark Liberty International Airport from Lower Manhattan can be greatly improved by making a relatively modest investment. By extending PATH service from Newark Penn Station approximately 2.5 miles to the Newark Liberty International Airport station, travelers from the airport will be able to ride the AirTrain Newark from the airline terminals to the Airport's Rail Link Station, connecting with PATH directly into Lower Manhattan. This two-seat trip will be equivalent to the current service available for rail passengers from Penn Station in midtown. Mayor Bloomberg's *Vision* presents a direct version of this airport access option, in addition to the JFK Direct option discussed below.

The construction of this extension is achievable in a relatively short period of time. The Newark Liberty Airport rail station was built with room for an extra platform and track space to accom-

By extending the existing PATH service by 2.5 miles, Lower Manhattan will have an efficient connection to AirTrain Newark.

modate a future transit connection. The station can be adapted to provide a connection with the extended PATH service by constructing an overpass or underpass structure to allow the extended PATH tracks to cross the Amtrak main line tracks. At the rail station, escalators and elevators from a new PATH platform will ascend directly into the AirTrain station concourse. In the Lower Manhattan Transit Complex, a passenger processing facility, including airline ticketing, check in, waiting, and flight and train information, could be created to allow air travelers the maximum level of convenience and comfort.

The extension of PATH to the Newark Liberty International Airport station will cost an estimated $525 million and will take 7 to 8 years to complete, including design, engineering, permitting, and construction.[7] The service will provide passengers an approximately 38-minute ride to Lower Manhattan from the Newark Liberty Airport rail station, requiring one transfer from AirTrain Newark to PATH. This improvement will save 12 minutes of travel time over existing train service. The Port Authority will work with partner agencies to secure funds for this project from outside of the $4.55 billion FEMA/FTA allocation.

LaGuardia Airport

LaGuardia traditionally has been New York's hub for domestic business air travel. The current trip from Lower Manhattan by subway and bus takes in excess of an hour and requires a transfer. The greatest potential for improving Lower Manhattan access to LaGuardia Airport in the near term exists with ferry service, which would take advantage of LaGuardia's location on the upper East River and the availability of ferry terminals in Lower Manhattan.

A new airport ferry service[8] would operate on a route from Lower Manhattan (Pier 11 and/or World Financial Center) and the Marine Air Terminal at LaGuardia, along with other potential stops, linking with a shuttle bus that provides access to the airline terminals at the airport. A new ferry landing and airport terminal connections, such as a shuttle bus service, would be required at the Marine Air Terminal. Such a service could be combined with the new East River/Lower Manhattan ferry operations, and possibly be extended to other locations on Long Island Sound, such as Rye, New York, or Stamford, Connecticut, as described in Chapter 3.

The Port Authority's regional ferry program has allocated $12 million in capital funds to establish passenger ferry service to the New York airports. With air passenger volumes still below pre-September 11th levels, timing for implementation of airport ferry services in the near term depends on renewed growth in air passenger volumes and interest by private ferry operators. The

High-speed ferry access would connect Lower Manhattan with LaGuardia Airport.

Port Authority and other partners see potential opportunities to initiate new ferry routes that draw on airport and commuter markets with enough combined ridership to sustain economically viable service.

In cooperation with partner agencies, the Port Authority will issue a Request for Expressions of Interest later this year to identify operator interest in LaGuardia Airport ferry routes.

In addition, the Port Authority is pursuing the initiation of another ferry service — to JFK International Airport. (See p. 70 for description of this possible service.)

John F. Kennedy International Airport and Long Island

Dramatically improving access to John F. Kennedy International Airport, New York City's primary international arrivals facility, is of the highest priority. By providing international air access that is convenient and reliable, Lower Manhattan (and, indeed, Manhattan as a whole) will gain a considerable asset – one that is fast becoming a standard among top business centers around the world. Equally important, the investments required to improve JFK access to Lower Manhattan will simultaneously improve commuter rail access for Long Island. It is therefore possible to stimulate Lower Manhattan's revitalization – and the region's growth – on two fronts through a single set of system improvements.

Promising, preliminary models for establishing such a combined JFK and Long Island service have emerged – the Super Shuttle and the JFK Direct. The Super Shuttle approach would offer a direct ride to Jamaica Station with a convenient transfer to the JFK Airport AirTrain. By largely using existing infrastructure and alignments, the Super Shuttle offers a lower cost and shorter implementation time than JFK Direct. The JFK Direct would create a one-seat ride directly to Jamaica and JFK Airport, utilizing a new tunnel beneath the East River and modern system technologies. JFK Direct offers a substantial savings in travel time to the airport. (These two approaches are described in greater detail below.) In addition to these models, a number of variants and alternatives merit further exploration.

To study the range of possibilities exemplified by the Super Shuttle and the JFK Direct, the LMDC, Port Authority, MTA, and New York City Economic Development Corporation (EDC) have partnered to initiate the JFK Airport Access and Long Island Commuter Service Alternatives Analysis Study, described more fully later in this section. The goal of this study will be to identify a high quality and buildable JFK and Long Island service that is prepared to enter into formal environmental review and construction.

The following text describes areas of inquiry for the study – beginning with the two preliminary models – and concludes with a more detailed description of the study itself.

The Super Shuttle Model

The Super Shuttle approach would utilize existing subway routes and LIRR tracks to create a direct trip from Lower Manhattan to Jamaica Station in Queens. This service would travel from Lower Manhattan on the A,C subway track and LIRR Atlantic Branch track to Jamaica Station. From there, riders would transfer to the soon-to-be operational AirTrain to JFK Airport or to LIRR commuter trains to Long Island. Because this option would pri-

marily operate using existing structures and systems, it could be implemented relatively quickly and at a lower cost than alternatives that rely more heavily on new construction. The limited new construction that would be required includes a short tunnel to bypass Atlantic/Flatbush Avenue Terminal in Brooklyn and another short tunnel to connect the C and F lines west of the Hoyt-Schermerhorn Station in Brooklyn. As currently conceived, no new construction would be required in Manhattan.

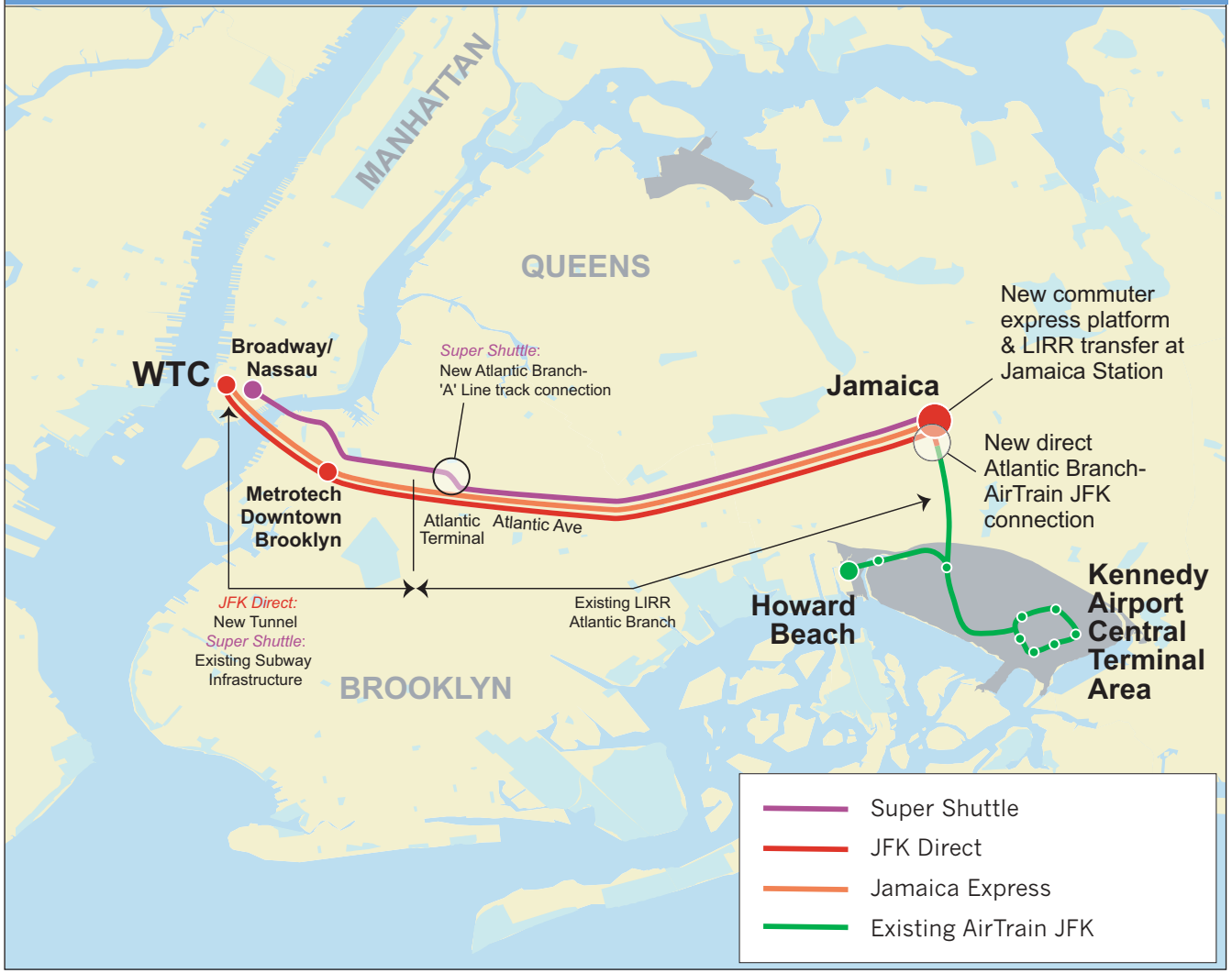
Airport riders would take the Super Shuttle to the AirTrain at Jamaica Station, which would bring them directly to the JFK terminals. The trip would take a total of 38 minutes, a savings of approximately 23-27 minutes compared to existing service. [9] This one-transfer option would be equivalent to Midtown service from Penn Station to either Newark Liberty or JFK, though the potential for premium subway cars used by the Super Shuttle would provide a higher level of traveler comfort.

Long Island commuters would transfer at Jamaica Station from LIRR trains to the Super Shuttle to Lower Manhattan. At present, a commute from Long Island requires as many as two transfers, or three "seats." The commuters' new one transfer, two-seat ride to Lower Manhattan would take 28 minutes, saving approximately 5-10 minutes compared to existing service. [10] With Super Shuttle, Long Island commuters would eliminate the transfer to a crowded subway car at Atlantic Terminal or Penn Station, instead boarding an empty Super Shuttle at Jamaica for a ride directly into Lower Manhattan.

Operationally, because the Super Shuttle would share tracks and a tunnel with the A train service, delays on either line would have the potential to affect both services. In addition, since the A/C line's East River tunnel is operating at maximum capacity, the introduction of the Super Shuttle would require the C line to be diverted onto the F train tracks/tunnel from Jay Street in Brooklyn to West 4th Street in Manhattan in order to create track capacity for the Super Shuttle. This option may therefore reduce overall system capacity for Lower Manhattan. The specific effect of this change must be analyzed.

The Super Shuttle is estimated to cost between $2 billion and $2.3 billion dollars and to take 5 years to build.[11] By taking advantage of existing subway tunnels with available capacity, this option significantly limits the cost and time of implementation. The Super Shuttle approach would provide a straightforward, quickly implementable new transit service that benefits both JFK air passengers and Long Island commuters.

Direct Connections to JFK and Jamaica: Alternative Models



There are several options that connect Lower Manhattan to JFK Airport and Jamaica.

The JFK Direct Model

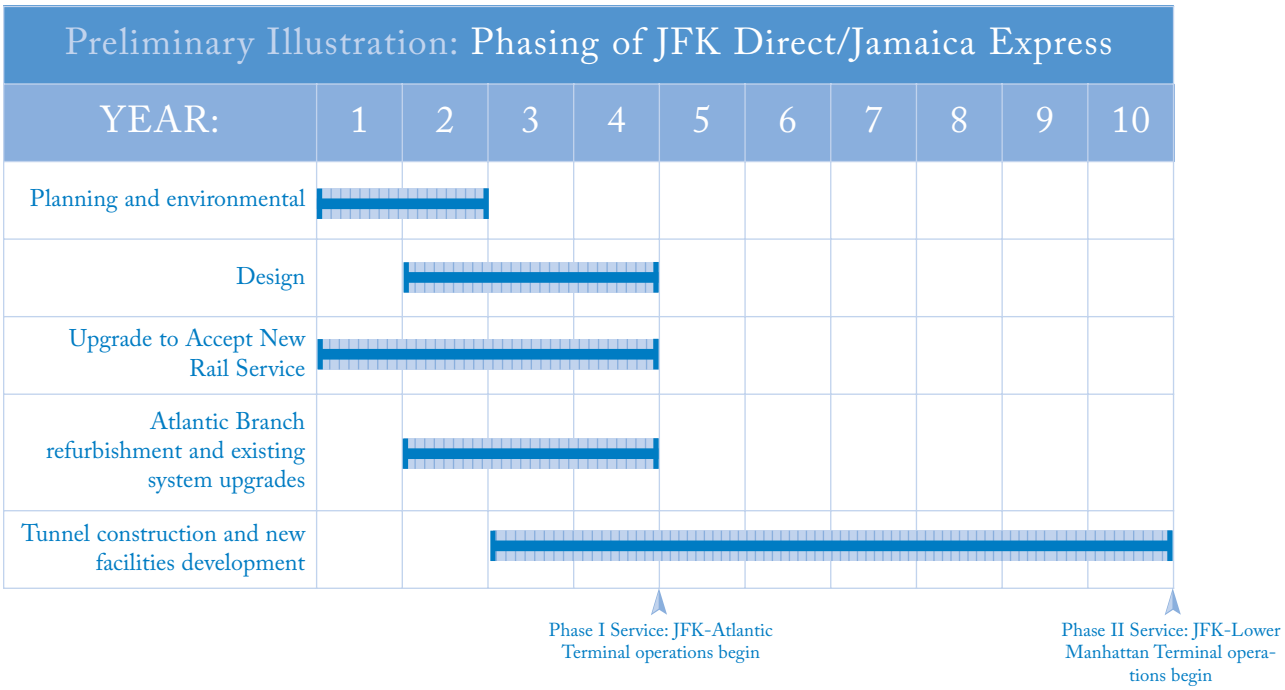
The JFK Direct would extend the AirTrain JFK from its planned terminal at Jamaica directly into Lower Manhattan, with a stop in Downtown Brooklyn. A companion service to the JFK Direct, the Jamaica Express, would also run from Lower Manhattan to Jamaica for Long Island customers, replacing current LIRR Atlantic Branch service. Presented as an option in Mayor Bloomberg's Vision, this system would require the construction of new tunnels and infrastructure from Lower Manhattan to Downtown Brooklyn, including a new East River tunnel, and minor modifications to the LIRR Atlantic Branch tracks.

The AirTrain JFK, scheduled to enter service later this year, will provide a significant improvement over existing transit connections to the airport, which currently require passengers to walk across multiple platforms, pay multiple fares, wait for connecting services, and travel a long, circuitous route. The JFK Direct would build upon the improvements provided by AirTrain JFK by providing a one-seat service to and from the JFK Airport terminals, eliminating the transfer via AirTrain at Jamaica or Howard Beach. With a one-seat ride competitive with car services and other premium modes of travel to the airport, the JFK Direct offers Lower Manhattan an amenity that is the emerging international standard for central business districts. As illustrated in the earlier chart, London, Tokyo, Paris, and Hong Kong already provide direct, one-seat rail access to their central business districts from their major airports.

Travel on the JFK Direct from Lower Manhattan to JFK could take as little as 23 minutes, saving 38-42 minutes over current service.[12] Like the JFK AirTrain, the JFK Direct would be specifically configured for airport travelers, with luggage storage, wide doors, and other specialized features.

Travel on the Jamaica Express from Lower Manhattan to Jamaica could take as little as 15 minutes, saving 18-22 minutes over current service.[13] Jamaica Express trains would consist of more cars than JFK Direct and would provide bench seating and other commuter rail amenities to serve Long Island riders.

Construction phasing could permit a portion of the JFK Direct to begin operation from JFK to Atlantic Terminal before the entire system is completed. Concurrent with tunnel construction, the LIRR Atlantic Branch could be fitted with AirTrain propulsion and control technology from Jamaica to Atlantic Terminal and a platform for transfers to LIRR trains could be built at Jamaica. These upgraded tracks and platforms could provide interim service to Atlantic/Flatbush Avenue Terminal for both JFK Direct and Jamaica Express trains. Upon completion of the new



tunnels and stations, the JFK Direct and Jamaica Express would extend service to Lower Manhattan, bypassing Atlantic Terminal and making one stop in Downtown Brooklyn.[14]

In Lower Manhattan, pending resolution of security issues, a baggage check-in and a dedicated platform could be provided for the JFK Direct, while ticketing and waiting facilities could be provided for the Jamaica Express. Separate fare systems for the two services could be implemented easily and passenger comfort could be maximized. Airport travelers would not need to squeeze onto rush-hour commuter trains and commuters would not be inconvenienced by luggage-laden railcars on major travel days.

The JFK Direct and Jamaica Express would cost $4.7-5.3 billion. It would take 5 years to construct the first phase of this project to Atlantic Terminal, as described above. The entire system would be completed in 10 years.[15] Further development of the proposal is needed to address construction feasibility, the relationship to the currently programmed AirTrain JFK service to Jamaica, and other institutional and operational issues. Nonetheless, the JFK Direct model demonstrates the potential for accomplishing a fast, reliable, one-seat ride to JFK Airport utilizing an existing technology.

JFK Airport Access and Long Island Commuter Service: Subjects for Study

The inter-agency Alternatives Analysis for JFK Airport and Long Island service will evaluate a range of options, including the models described above, over a year-long period. The study will place a particular emphasis on constructability and operational feasibility; it will document existing baseline conditions and services, examine the cost of each alternative, and explore environmental, organizational, and community impacts. Rigorous demand analyses based on ridership forecasts and population growth data will be conducted. Alternatives will be identified that will provide a significant improvement compared to existing service in categories such as travel time, frequency, number of transfers, and passenger utilization. Ultimately, a single preferred alternative will be chosen for implementation. Short-term solutions may also be identified for implementation while the development and construction of the long-term approach progresses.

The chosen approach may take the form of one of the two models, may incorporate altogether different elements, or may combine the components and benefits of both concepts. One example of the latter possibility is as follows: a hybrid vehicle, capable of operating within both the subway and AirTrain systems, could be designed to maximize usage of existing infrastructure, as the Super Shuttle does, while also providing a convenient one-seat ride from Lower Manhattan to the airport, as the JFK Direct does. Such an idea will be explored thoroughly as part of the study.

Another area that merits investigation is the creation of a new East River tunnel. A key component of the JFK Direct model, a new tunnel could offer significant benefits for a Super Shuttle-type system by providing a means to avoid the capacity issues of existing tunnels. In addition, further research is warranted to explore connectivity with existing subway services. A new system could be configured to maximize connections to other services or even to physically connect to and extend an existing transit line. It is possible that a system for one-seat JFK Airport and Long Island access that incorporates hybrid vehicle technology, utilizes a new tunnel, and provides connectivity with other services would be priced at a level between the Super Shuttle and JFK Direct models.

The above are only a subset of the issues that will be reviewed within the study. At the conclusion of the analysis, the alternative identified as the preference of the agencies will represent the most favorable balance of feasibility, functionality, and operability, considering the pros and cons of each option. Throughout the study, data will be generated and preliminary analysis conducted for use in an Environmental Impact Statement (EIS) that will commence upon the selection of the preferred alternative. Concurrently, funding will be secured for the project. With the EIS complete, the preferred alternative for JFK and Long Island service will begin construction.

Short-term Improvement: Ferry Service to JFK

The Port Authority is undertaking efforts to develop a passenger ferry service linking Lower Manhattan and Midtown to the airport as a short-term access improvement complementing the AirTrain JFK links to the LIRR and the subway system. From Lower Manhattan, ferry service could provide a reliable 40-50 minute service to the airport. The Port Authority anticipates initiating the service by late 2005.

Downtown Manhattan Heliport

In addition to the above-described rail service, a much smaller scale, relatively inexpensive, supplemental airport service for business executives and other travelers could be created in the form of regularly-scheduled Lower Manhattan helicopter service from the Downtown Manhattan Heliport (DMH) at Pier 6.

New York has a long history of helicopter services, including services to and from the area's three airports. However, no scheduled services are operating at this time. The last scheduled airport service from Manhattan ended two decades ago; only high price range chartered services are currently available. Lower Manhattan is therefore positioned to offer a unique amenity by providing a premium business district-to-airport service on a scheduled (not merely chartered) basis.

To enable the provision of regularly scheduled helicopter operations in New York City, a system of regulations would be required to manage service operations between the downtown Pier 6 heliport and the area's major airports. This system would need to set guidelines for passenger security, equipment maintenance, ticketing, baggage handling, flight scheduling, and other service parameters. Provisions would be needed to help reduce noise impacts to the greatest practical extent. In addition, the Federal Aviation Administration (FAA) would need to review and refine the area's helicopter flight path system to ensure that new service would not interfere with airplane traffic and would allow for both visual and instrument flights. With comprehensive operating regulations in place, helicopter service providers would have greater certainty in developing and implementing regularly scheduled flights.

Very little capital investment would be required to initiate this service. The landing and terminal facilities at the DMH and the helicopter facilities at the area's three airports are in good condition. The barriers to regularly-scheduled helicopter service to the airports are organizational rather than infrastructural.

However, as safety and security concerns would be paramount for a helicopter service, a number of basic requirements would need to be satisfied. These include the following:

- Establishment of landing protocol at the airports with a designated terminal gate and security systems for the helicopter passengers that are approved by the Transportation Security Administration
- Approval of the new services by the FAA and US Department of Transportation
- Provisions for the storage of jet fuel and for refueling at the DMH, which require New York City Fire Department approval

Assuming these requirements are met and operational guidelines are developed, regular helicopter service between Lower Manhattan and the three area airports could be implemented relatively quickly. Though this service would by no means supplant rail access or approach its capacity, a number of potential operators are available and a Lower Manhattan heliport already exists. Currently, a charter helicopter service from the Downtown Manhattan Heliport to the airport can cost approximately $1,000 per flight.[16] Regular service could conceivably achieve economies of scale to reduce that cost to below $100 per passenger. Such a service could be made more attractive with a feeder van or shuttle bus in Lower Manhattan and a similar service at the airports for passenger distribution to terminals. Further exploration and pursuit of this idea is warranted.