



About this Profile

This is one of four profiles¹ developed by the New York City Labor Market Information Service (NYCLMIS) about the transportation sector's top employment subsectors. The others are about truck transportation, transit/ground passenger transportation, and support activities for transportation.

This profile is intended to help workforce development *account executives* with business development and job placement, *career advisors* with job counseling, and *education and training professionals* with their activities in the air transportation subsector. Jobseekers can also use this information to help with career decision-making. Icons appear throughout this profile to mark findings and recommendations of special interest to these respective audiences. See page 2 for a guide on **How to Use this Profile**, and an accompanying key to the icons.

Terms and Definitions

Air transportation is the second largest transportation subsector accounting for about 25,000 of the 82,884 private sector jobs (Figure 1). Although it reflects a small share of total employment in New York City, air transportation plays a critically important role in the economic vitality of the city.

The air transportation subsector is diverse. Aircraft carriers can move passengers and/or cargo; can be scheduled or on-demand (i.e., charter); and may range in size from major airlines, regional carriers, to private carriers.

Aside from the economic downturn being experienced at the time of this writing, the following are some major trends affecting the air transportation subsector and its prospects for employment:

- **Competitive environment.** Industry deregulation in the 1970s has created a more competitive environment that favors businesses that can operate efficiently and maintain a cash flow substantial enough to withstand economic downturns. The subsector has been undergoing tremendous consolidation featuring a high number of mergers.

HOW TO USE THIS PROFILE

The table below shows specific ways that *career advisors*, *account executives*, and *education and training professionals* can use the information contained in each section of this profile to help them to serve jobseekers and businesses.

PROFILE SECTION	THIS SECTION CAN BE USED TO:
Terms and Definitions	<ul style="list-style-type: none"> ■ Speak more knowledgeably with jobseekers and employers about the subsector.
The Subsector in New York City	<ul style="list-style-type: none"> ■ Identify top employers. ■ Locate which boroughs have most employer sites.
Jobs	<ul style="list-style-type: none"> ■ Know how many jobs there are and where they are located. ■ Understand where job opportunities may be improving or worsening.
Wages	<ul style="list-style-type: none"> ■ Identify entry-, mid-, and high-level wages.
Occupations and Advancement Pathways	<ul style="list-style-type: none"> ■ Identify promising occupations for jobseekers. ■ Identify the skills, experience and other qualifications employers will require.
Current Workforce Facts	<ul style="list-style-type: none"> ■ Know who works in the subsector now. ■ Compare current workforce with employers' needs to identify "gaps".

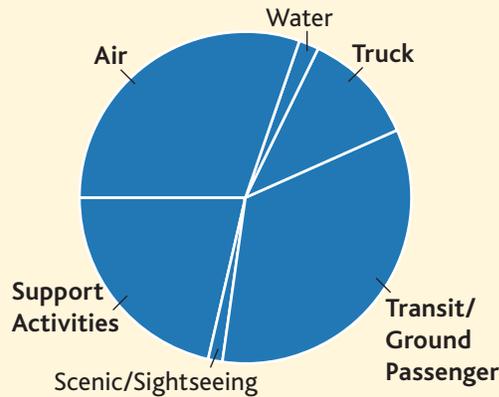
WORKFORCE PROFESSIONALS PROFILE USER KEY

 CA	Career Advisors
 AE	Account Executives
 ET	Education and Training Providers
	All Stakeholders

These icons appear throughout the text to mark findings and recommendations that will be of particular interest to specific workforce stakeholders.

FIGURE 1 New York City Private Sector Employment in Transportation*

Air	25,248
Truck	9,374
Transit/Ground Passenger	27,899
Support Activities	17,583
Scenic/Sightseeing	1,280
Water	1,500
Private Sector Transportation	82,884
All Private Sector Jobs	3,514,234



SOURCE New York State Department of Labor, Quarterly Census of Employment and Wages, 2007.

* In 2007, transportation accounted for 2.3% of all private sector jobs in New York City.

■ **Fuel prices.** Crude oil prices have risen and been volatile for the past several months at the time of this writing. As a result of the increased cost of jet fuel, air carriers have made flight route cuts and announced layoffs in the past few months.

■ **Underinvestment in air transportation infrastructure.** Some of the greatest challenges facing the city's air transportation subsector include improving ground access to airports; expanding alternative access routes; increasing aircraft flow efficiency within the airports; and increasing the efficiency of cargo operations.

■ **Other challenges.** Other challenges include: finding more sustainable fuels; maintaining safety and security; and upgrading the American air traffic control system.

AE Account executives need to understand how the subsector is organized (as described above) and the major trends affecting air transportation so they can speak more knowledgeably with employers.

NAICS NAICS allows users to uniformly identify and classify companies. Using NAICS helps to ensure that we are referring to the same group of firms. After workforce professionals identify the sector (2-digit NAICS code), subsector (3-digit code) or industry group (4-digit code) that they want to explore, they should give some more thought to what companies are and are not included, and then expand or reduce their NAICS selection as needed.

North American Industry Classification System Definition of the Air Transportation Subsector (NAICS 481)

Industries in this subsector provide air transportation for passengers and/or cargo. The subsector includes carriers that specialize in scheduled and nonscheduled air transportation. Scheduled carriers fly regular routes on regular schedules and operate even if flights are only partially loaded. Nonscheduled carriers provide chartered air transportation of passengers, cargo, or specialty flying services.

TABLE 1 Largest Air Transportation Establishments in New York City

ESTABLISHMENTS	BOROUGH	ON-SITE EMPLOYMENT
British Airways North America*	Queens	900
Evergreen Eagle*	Queens	600
North American Airlines*	Queens	580
American Airlines Inc ⁺	Queens	500
JetBlue Airways ⁺	Queens	420
United Air Lines ⁺	Queens	300
Alitalia Cargo*	Queens	250
British Airways Executive Club*	Queens	250
Continental Airlines ⁺	Queens	250
Deutsche Lufthansa ⁺	Queens	200

SOURCES *ReferenceUSA and ⁺Dun & Bradstreet 2007 establishment lists. Retrieved May 2008 (NAICS 4811 and 4812).

Some activity related to air transportation technically falls outside of NAICS code 481: not included are both “landside” establishments (parking, airport operations, and airport vendor relations) and “airside” establishments (air traffic control and suppliers of business and manufacturing services).

Jobseekers and workforce professionals interested in air transportation jobs should look at companies in NAICS 481 and in the support activities for air transportation industry group (NAICS 4881).

Air transportation is highly connected with every other economic sector and is susceptible to economic fluctuations.

Workforce professionals should be aware that job placement prospects in the air transportation subsector will decrease during economic downturns and increase during economic upturns.

The Subsector in New York City

Queens is the hub of air transportation activity in New York City. Table 1 shows New York City’s largest air transportation establishments, all of which are located in and around LaGuardia or John F. Kennedy (JFK) Airports.

An establishment is a location where companies provide materials or services and can be seen as an “employment site.” A single firm or company may have many establishments.

Some corporate offices (not shown) are located midtown Manhattan and in other parts of Queens. These top 10 establishments account for about one-sixth of the jobs in the air transportation subsector.

AE Account executives should know the largest establishments in the air transportation subsector and be aware that other jobs exist in smaller companies.

AE To collect establishment names and contact information, account executives can:

- Purchase commercially available lists such as Hoover's, Moody's, Dun & Bradstreet or ReferenceUSA;
- Download lists for free at the New York Public Science, Industry, and Business Library (SIBL) on 34th Street and Madison Avenue in Manhattan; or
- Contact nyclmis@gc.cuny.edu for assistance and information about how to access business lists.

Figure 2 shows that the number of passengers flying into and out of New York City's airports have met and surpassed their peak level in 2000.

More recently, a weak dollar has contributed to an overall increase in international travel, despite the economic downturn.

AE Account executives should confirm with potential employers that passenger travel is stable or growing and inform career advisors about long-term trends and opportunities in the air transportation subsector.

Cargo air transportation has declined since 2000 (Figure 3). Some of this is because transporting goods by air is expensive and trucks can haul goods more cheaply. In all likelihood, precious and perishable goods — such as jewels, art, and fresh flowers — will continue to be flown into and out of New York City in the foreseeable future.

CA Career advisors should keep in mind that the job prospects in air cargo carriers may not be as good as in air passenger carriers if current trends continue.



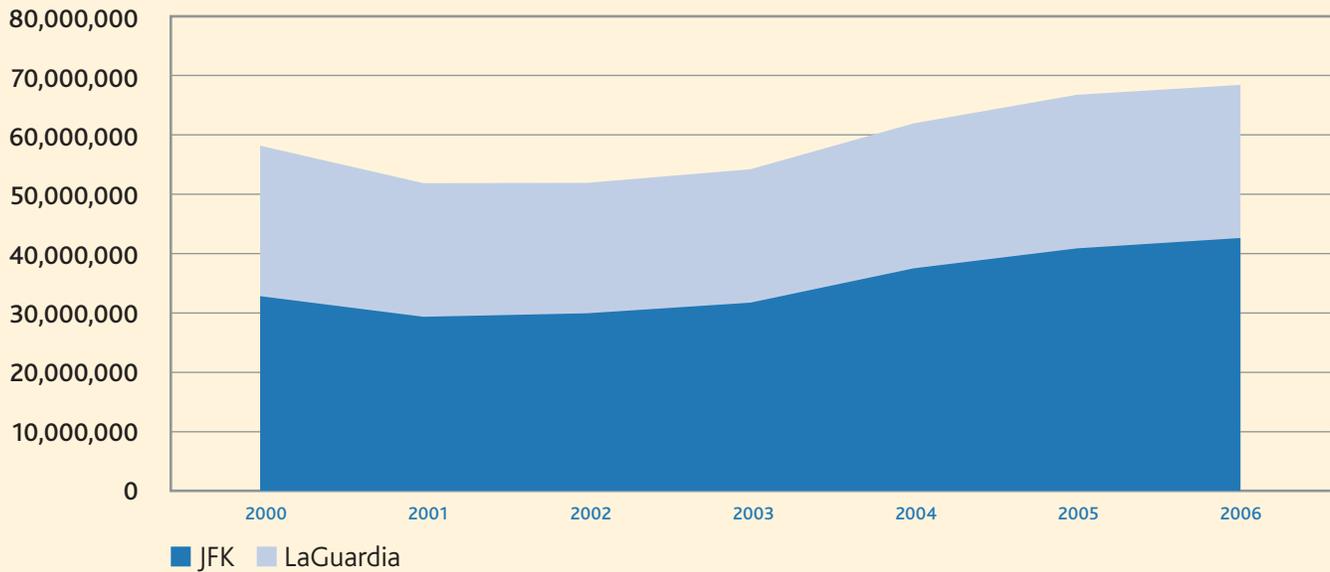
Queens is the hub of air transportation activity in New York City.

Jobs

In 2007, there were about 25,000 New York City jobs in the subsector and all but about 900 were in Queens. The number of jobs in the subsector has decreased between 2000 and 2007 (Table 2). Likely reasons for the decrease in jobs are airline consolidation and bankruptcy, or airlines moving offices or flight hubs outside of New York City.

The short-term outlook for jobs in the air transportation subsector is uncertain. The following human resource trends could affect the availability of jobs in entry- and mid-level occupations in New York City:

FIGURE 2 Number of Passengers Served at New York City Airports, 2000–2006



SOURCE Port Authority of New York and New Jersey, Airport Fact Sheet, 2008.
www.panynj.gov/commutingtravel/airports/html/lg_facts.html and www.panynj.com/commutingtravel/airports/html/ken_facts.html

■ **Automation.** Booking, customer service, and check-in functions have become automated so that travelers may not have to interact with a human being to book a flight or check in.

■ **Outsourcing.** Some airlines operate off-site call centers to handle reservations and ticketing and these jobs typically are not located in New York City. Regular aircraft maintenance is moving where labor costs are lower. However, light or “line” maintenance — such as tire or signal light changes, repairs of an immediate nature — still occur on-site at the airport. There should always be some aircraft maintenance jobs in the region.

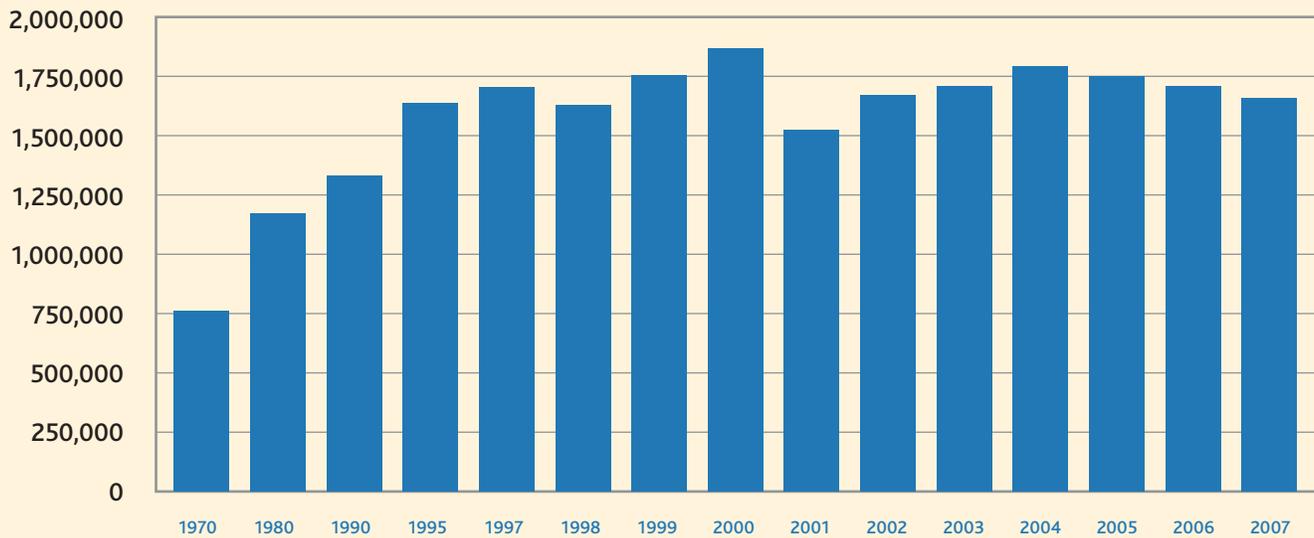
AE Account executives should speak with employers about their plans to automate or outsource their workforce and inform career advisors about potential changes in demand for the relevant occupations.

Wages

The average annual wage for air transportation jobs in New York City is about \$60,000, up 11 percent since 2000 even after adjusting for inflation.

Average air transportation salaries in New York City range from a low of \$36,500 per year to a high of almost \$69,000. Although there are fewer jobs at LaGuardia Airport, they are somewhat higher paying on

FIGURE 3 Air Cargo Tonnage Handled at New York City Airports, 1970–2007



SOURCE Port Authority of New York and New Jersey, Airport Fact Sheet, 2008. www.panynj.com/commutingtravel/airports/html/ken_facts.html

average than those at JFK. This is probably because more cargo-related jobs are located at JFK and these pay less on average.

Occupations and Advancement Pathways

Occupations in air transportation fall into one of two categories: operations or management. Operations jobs exist wherever air transportation happens (e.g., dispatchers, pilots, and flight attendants). Management jobs occur at headquarter locations and include marketing, strategic planning, and finance functions. Airlines that are headquartered in New York City, like JetBlue, provide a wider variety of jobs in both management and operations.

The first column of Table 4 shows the top occupations in air transportation ranked by the total number of jobs in New York City in 2006. The top five are transportation attendants, aircraft pilots, reservation and ticket agents, customer service representatives, and aircraft mechanics. Job opportunities in four of the top five occupations are expected to grow, except for reservation and ticket agents.²

 Occupational projections from the Bureau of Labor Statistics Occupation Employment Survey Program are recognized as the state of the art in labor market information. These projections have some limitations, however. We recommend that

TABLE 2 Air Transportation Jobs in New York City by Borough, 2000–2007

	2007	INCREASE/DECREASE 2000 TO 2007	
		# +/-	% +/-
Manhattan	897	-1,424	-61%
Queens	24,351	-4,729	-16%
New York City	25,248	-6,153	-20%

SOURCE Quarterly Census of Employment and Wages, New York State Department of Labor, 2000–2007.

TABLE 3 Average Annual Salary* in Air Transportation: New York City by Borough, 2000–2006

	2006	INCREASE/DECREASE 2000 TO 2006	
		\$ +/-	% +/-
Manhattan	\$60,052	\$6,590	12%
Queens	\$56,289	\$2,727	5%
New York City	\$56,418	\$2,863	5%

SOURCE Quarterly Census of Employment and Wages, New York State Department of Labor, 2000–2006.

* In current \$

readers weigh these data against other data presented in this profile to form their own view about occupational outlooks in the subsector.

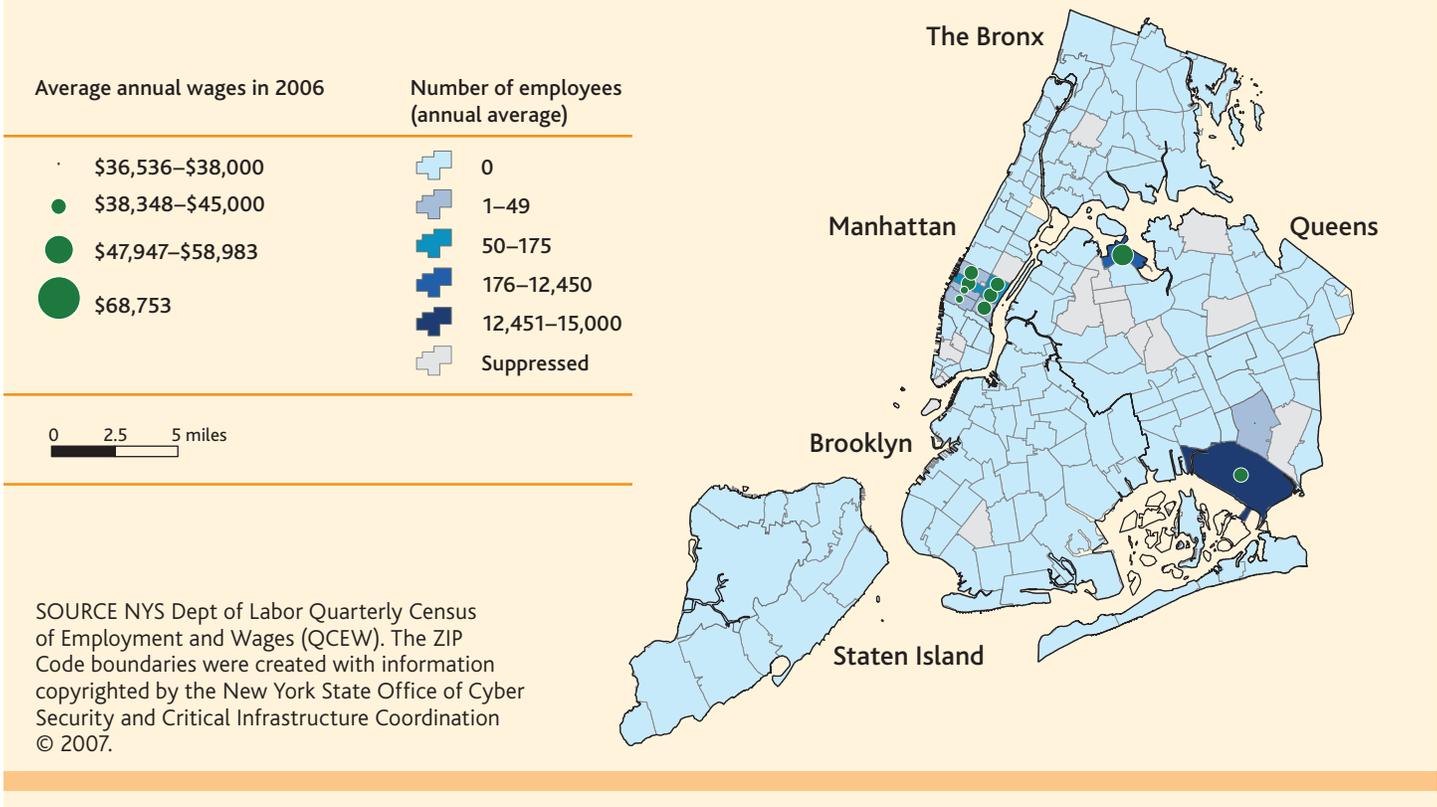
It is important to look beyond job numbers and growth. Table 4 also shows the *percent of replacement job openings* (as opposed to *new jobs* that are created when subsector employment numbers expand). When a majority of the projected jobs will be replacement jobs, it suggests a higher rate of turnover. Among the top five occupations, all but airline pilots require no more

than a high school diploma or its functional equivalent, the certificate of General Educational Development (GED).

In fact, almost all entry level jobs in air transportation require no more than a high school diploma or GED. Some employers may require less or more education depending on the applicant's level of skill and experience.

AE Account executives should identify which employers are willing to hire jobseekers who have not earned a high school diploma or GED and inform career advisors.

FIGURE 4 Air Transportation Employment and Wages in New York City, 2006³



Also shown in Table 4 are typical hourly wages earned by entry-, mid-, and high-level earners in each of the top ranking occupations in the air transportation subsector:

- Transportation and all other managers, as well as police/patrol officers receive the highest wages starting at about \$20 per hour.
- Transportation attendants, laborers and material movers, and data entry keyers start out just above minimum wage levels and peak out under \$20 per hour.
- Aircraft mechanics; bookkeeping, accounting, and auditing clerks; and automotive technicians have wider pay ranges.

Workers in these occupations could earn as much as some supervisors and managers.

CA Occupations with wider pay ranges may offer jobseekers more room for advancement with on-the-job experience, without switching jobs or having to obtain additional postsecondary education.

Skills testing and other requirements may apply to specialized occupations within air transportation, especially for Transportation Security Officers (TSOs) and “airside” occupations requiring applicants to pass

**TABLE 4 Top Ranking Occupations in the Air Transportation Subsector:
Employment Outlook, Educational Requirements, and Wages**

TOP RANKING OCCUPATIONS (IN ORDER OF # OF JOBS IN 2006)	2014 OUTLOOK GROWTH/DECLINE	% REPLACEMENT	EDUCATIONAL REQUIREMENTS*	2006 HOURLY WAGES		
				ENTRY	MEDIAN	HIGH
Transportation Attendants	^	73%	HS/GED	\$7.32	\$8.71	\$12.37
Aircraft Pilots and Flight Engineers	^	71%	BA	na	na	na
Reservation and Transportation Ticket Agents and Travel Clerks	v	100%	HS/GED	\$9.84	\$15.90	\$23.20
Customer Service Representatives	^	65%	HS/GED	\$9.96	\$15.96	\$26.12
Aircraft Mechanics and Service Technicians	^	100%	HS/GED	\$18.20	\$25.90	\$32.07
Managers All Other	^	79%	AA/TRADE	\$25.51	\$45.81	na
Transportation Storage and Distribution Managers	^	75%	AA/TRADE	\$29.55	\$44.99	na
Laborers and Freight Stock and Material Movers Hand	v	100%	HS/GED	\$7.55	\$11.17	\$18.73
Baggage Porters Bellhops and Concierges	^	85%	HS/GED	\$7.41	\$12.03	\$19.98
Bookkeeping Accounting and Auditing Clerks	v	100%	AA/TRADE	\$11.49	\$17.85	\$25.74
Police and Sheriffs Patrol Officers	^	84%	HS/GED	\$19.70	\$29.29	\$44.20
Janitors and Building Cleaners	^	66%	HS/GED	\$7.58	\$12.10	\$20.00
Security Guards and Gaming Surveillance Officers	^	80%	HS/GED	\$7.96	\$11.91	\$20.63
Automotive Service Technicians and Mechanics	^	87%	HS/GED	\$9.62	\$17.77	\$30.16
Data Entry Keyers	v	100%	HS/GED	\$8.82	\$13.18	\$19.63

SOURCE **Occupational ranking** from US Bureau of the Census, American Community Survey, Public Use Microdata Sample, 2005–06
Educational requirements and wage data from O*NET Online (<http://online.onetcenter.org/>)
Occupational outlooks and replacement jobs from the Bureau of Labor Statistics, Occupation Employment Survey, 2006.

* Indicates the level of education attained by most individuals in this occupation in New York City. Some employers may require less or more years of education.

HS/GED = high school diploma or GED usually required.

AA/TRADE = 2-year college degree or postsecondary vocational or trade school usually required.

BA = 4-year college degree usually required.

na = Hourly wage is not available for this occupation.

credit and criminal background checks in order to obtain security clearance.

According to subsector experts, larger carriers are not as likely to hire jobseekers who do not have previous air transportation experience. The typical advancement pathway in New York City starts with line staff positions at small regional or discount

airlines or business services establishments, moving to a supervisory position after obtaining experience and perhaps a two-year degree. After a few years of supervisory experience, workers can command higher salaries by moving to larger carriers or government positions with the Port

Authority or Federal Aviation Administration (FAA).

CA Career advisors should try to place their less experienced in smaller airlines or discount carriers if they experience resistance from larger carriers.

An alternative advancement route is to earn trade school or FAA certification in a skilled trade such as aircraft mechanics.

 For a complete list of New York State-approved workforce training providers — searchable by sector, occupation, and borough — go to www.nyc.gov/trainingguide. The NYC Training Guide contains course

and contact information, job placement rates, student reviews of courses, cost, and eligibility for individual training grant (ITG) vouchers through the Workforce1 Career Centers or the New York City Department of Human Resources Administration.

CA Some good reasons jobseekers and career advisors should focus on occupations in air transportation are: relatively good pay, diversity of occupations, advancement opportunities, and reasonable education requirements.

Current Workforce Facts

Most adult residents who work in the sub-sector are male, but the local air transportation workforce appears to be diversifying

TABLE 5 Demographic Characteristics of the New York City Air Transportation Workforce, 2000 and 2005/06

PERCENT OF NEW YORK CITY AIR TRANSPORTATION EMPLOYEES WHO ARE	2000	2005/06
New York City residents*	55%	54%
Male	48%	56%
White	36%	31%
Black	26%	31%
Hispanic	23%	27%
Asian	8%	9%
Age 18–34	45%	36%
35–44	26%	40%
44–54	18%	15%
Age 55+	10%	9%
Less than high school or GED	10%	12%
High school diploma or GED	22%	36%
Some college	26%	23%

SOURCE U.S. 2000 Decennial Census and 2005 and 2006 American Community Surveys public use microdata (PUMS) files.

*The remaining percentages that appear in this table are of people who both live *and* work in New York City.

along racial/ethnic lines. Asian workers are somewhat under-represented in the subsector's workforce.

Almost half of the local air transportation workforce has a high school diploma, GED, or fewer years of education. This confirms the occupational data: many jobs in the subsector do not require education beyond high school or GED.

Fewer young New Yorkers are entering occupations in air transportation: the percent of employees between the ages of 18 and 34 decreased from 45 percent in 2000 to 36 percent in 2006.

 As the workforce ages out, workforce staff should encourage youth service providers to match youth and young adults to opportunities within the air transportation subsector.

As the nation's current military involvement in the Middle East subsides, we can expect to see veterans returning to the civilian labor force with skills appropriate the air transportation subsector.

 Organizations that serve veterans should be prepared to assess jobseekers re-entering the labor market who may have skills to take air transportation jobs.

Endnotes

1 The information in this profile is drawn from a longer, more detailed report entitled *Employment in New York City's Transportation Sector* that includes additional background on truck transportation and three other transportation subsectors.

2 Information about almost any occupation is available through the U.S. Department of Labor through a web-based program known as O*NET, accessible at <http://online.onetcenter.org/> For detailed profiles of the top 10 occupations in transportation — including job descriptions, working conditions, skills, abilities, educational and experience requirements — see NYCLMIS' *Employment in New York City's Transportation Sector* (also as standalone documents) at www.urbanresearch.org or www.nyc.gov/wib.

3 The data in this map includes private sector employment only. The New York State Department of Labor (NYS DOL) suppresses employee and wage data for any ZIP Code that includes fewer than three establishments or contains a single unit that accounts for 80 percent or more of the industry's employment. This map omits any establishment in the five boroughs that reported ZIP Code outside of New York City to the NYSDOL. In 2006, there were 9 of these firms (out of 157) in this NAICS code with 64 employees (out of almost 25,000) and annual average wages of almost \$110,000.

About the NYCLMIS

The New York City Labor Market Information Service (NYCLMIS) provides labor market analysis for the public workforce system. The service is a joint endeavor of the New York City Workforce Investment Board (WIB) and the Center for Urban Research at The Graduate Center of the City University of New York. The NYCLMIS' objectives are to:

- Develop action-oriented research and information tools that will be used by workforce development service providers and policy makers to improve their practice.
- Be the portal for cutting-edge and timely labor market data about New York City.

The NYCLMIS primarily serves the program and policy needs of the public workforce system. The NYCLMIS creates research and associated products that are of service to the broader practitioner and policy communities in their day-to-day and strategic decision-making. These products help distill, frame, and synthesize the volumes of data available for the practical use of the public workforce system's partners and stakeholders, with the overall goal of raising public awareness of the importance of workforce development in New York City.

About the WIB

The New York City Workforce Investment Board (WIB) administers the federal Workforce Investment Act funds in New York City and oversees the public workforce system run by the Department of Small Business Services and the Department of Youth and Community Development. The WIB is made up of over 40 volunteer members, appointed by the Mayor, representing local businesses, educational institutions, labor unions, community-based organizations, and other government agencies.

About the Center for Urban Research

Working with the City University of New York Graduate Center's faculty and students, the Center for Urban Research organizes basic research on the critical issues that face New York and other large cities in the U.S. and abroad; collaborates on applied research with public agencies, non-profit organizations, and other partners; and holds forums for the media, foundations, community organizations and others about urban research at The Graduate Center of the City University of New York.



The logo for NYC LMIS, featuring the letters 'NYC' in white inside a dark blue square, followed by 'LMIS' in a large, bold, dark blue sans-serif font.

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