A Transportation Profile
Of New York State

PLANNING AND STRATEGY GROUP
New York State Department of Transportation
May 2004
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This report provides a convenient reference for New York State transportation statistics. The focus of the document is on demographic and related travel measures which, for the convenience of the user, are summarized under one cover. Most of the information presented was obtained from the 2000 Census, the 1997 Commodity Flow Survey, the 2001 National Household Transportation Survey (NHTS), the 2000 Transborder Surface Freight Transportation Data and the 2000 Highway Statistics published by the Federal Highway Administration. Thus 2000 was selected as the most common year for comparative purposes, though more recent data may be available in some instances.
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INTRODUCTION

New York became “The Empire State” in the 19th century largely as a consequence of building the nation’s finest transportation system. Its early turnpikes, canals and railroads were the country’s best, making New York a national hub of economic activity, connecting the Midwest and Mid-Atlantic regions with New England, eastern Canada, and the Atlantic Ocean.

In the 20th century, the New York State transportation network was developed to move people and freight efficiently. Downstate subways, buses, and commuter railroads are indispensable to the State’s economic vitality. The State’s six principal Interstate highways and associated connecting Interstate commuter routes, as well as the state highway system, move millions of people and tons of freight each day. In 2000, New York State public transportation providers carried more than 2.5 billion passengers, the State’s airports boarded 36.9 million travelers and Amtrak carried 1.4 million passengers on its Empire Service Corridor route.

Figure 1 shows New York State’s national transportation rankings. By nearly all measures, New York consistently ranks among the top 20 states, and for most among the top five. Three per-capita measures -- gallons of fuel consumed, vehicle-miles traveled, vehicle ownership -- suggest the State’s personal transportation use and energy consumption are the most efficient in the Nation.

A NOTE ON GEOGRAPHICAL TERMINOLOGY FOR NEW YORK STATE

In this publication, unless otherwise noted, DOWNSTATE includes New York City, Nassau and Suffolk Counties on Long Island, and the lower Hudson Valley counties. UPSTATE refers to all other northern, central and western counties. The DOWNSTATE area may also be broken down into one of the following subsections: NEW YORK CITY refers to the five boroughs; LONG ISLAND refers to Nassau and Suffolk Counties; and the HUDSON VALLEY or LOWER HUDSON VALLEY refers to Columbia, Dutchess, Orange, Putnam, Rockland, Ulster, and Westchester Counties.
Figure 1. New York State's transportation rankings

<table>
<thead>
<tr>
<th>Item</th>
<th>State Ranking</th>
<th>Share of U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population ('00)</td>
<td>3</td>
<td>6.7%</td>
</tr>
<tr>
<td>Urban ('00)</td>
<td>5</td>
<td>7.3%</td>
</tr>
<tr>
<td>Rural ('00)</td>
<td>2</td>
<td>4.0%</td>
</tr>
<tr>
<td>Land Area (sq mi) ('00)</td>
<td>4</td>
<td>1.3%</td>
</tr>
<tr>
<td>Vehicle Registrations ('00)</td>
<td>4</td>
<td>4.4%</td>
</tr>
<tr>
<td>Cars</td>
<td>4</td>
<td>5.5%</td>
</tr>
<tr>
<td>Trucks</td>
<td>4</td>
<td>2.8%</td>
</tr>
<tr>
<td>Driver Licenses ('00)</td>
<td>4</td>
<td>5.8%</td>
</tr>
<tr>
<td>Highway Mileage ('00)</td>
<td>4</td>
<td>2.9%</td>
</tr>
<tr>
<td>Vehicle Miles Traveled ('00)</td>
<td>4</td>
<td>4.7%</td>
</tr>
<tr>
<td>Transit Passengers ('00)</td>
<td>1</td>
<td>35.3%</td>
</tr>
<tr>
<td>Amtrak Passengers ('00)</td>
<td>4</td>
<td>22.2%</td>
</tr>
<tr>
<td>Airport Boardings ('00)</td>
<td>5</td>
<td>5.8%</td>
</tr>
<tr>
<td>Air Cargo ('02)</td>
<td>3</td>
<td>9.0%</td>
</tr>
<tr>
<td>Total ($) Exports ('00)</td>
<td>4</td>
<td>5.5%</td>
</tr>
<tr>
<td>Gallons/Capita ('00)*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>VMT/Capita ('00)*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Vehicles/Capita ('00)*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Resident Work-Trips ('00)</td>
<td>4</td>
<td>6.4%</td>
</tr>
<tr>
<td>Drive-Alone</td>
<td>4</td>
<td>4.7%</td>
</tr>
<tr>
<td>Carpool</td>
<td>4</td>
<td>4.8%</td>
</tr>
<tr>
<td>Taxi</td>
<td>4</td>
<td>33.7%</td>
</tr>
<tr>
<td>Surface Transit</td>
<td>2</td>
<td>14.5%</td>
</tr>
<tr>
<td>Rail Rapid Transit</td>
<td>1</td>
<td>64.5%</td>
</tr>
<tr>
<td>Railroad</td>
<td>1</td>
<td>34.7%</td>
</tr>
<tr>
<td>Ferry</td>
<td>1</td>
<td>26.2%</td>
</tr>
<tr>
<td>Walk</td>
<td>1</td>
<td>13.5%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>8</td>
<td>5.1%</td>
</tr>
<tr>
<td>Work-at-Home</td>
<td>3</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

*Measures of efficiency (smallest ratio is most efficient)
## 1. TRANSPORTATION STATISTICS AT-A-GLANCE

### Demographic Data (2000 Census)

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>47,376 sq mi (30th in the US)</td>
</tr>
<tr>
<td>Jurisdictions</td>
<td>62 counties, 62 cities, 931 towns, 555 villages, 328 census-designated places (CDPs), 10 Indian reservations</td>
</tr>
<tr>
<td>Population</td>
<td>18,976,457 (3rd in US -- up 5.5% from 17,990,455 in 1990)</td>
</tr>
<tr>
<td>Density</td>
<td>401.9 persons per sq mi (7th in the US)</td>
</tr>
<tr>
<td>Urban</td>
<td>16,601,126 or 87.53% of the State’s population(3rd largest urban population of any state, after California and Texas)</td>
</tr>
<tr>
<td>Rural</td>
<td>2,375,331 or 12.5% (6th largest rural population of any state, after Texas, North Carolina, Pennsylvania, Ohio and Michigan)</td>
</tr>
<tr>
<td>Families</td>
<td>4,673,485</td>
</tr>
<tr>
<td>Households</td>
<td>7,060,595</td>
</tr>
</tbody>
</table>

### Per-Capita Personal Income (2000)

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide</td>
<td>$34,689</td>
</tr>
<tr>
<td>Metropolitan Portion</td>
<td>$35,719</td>
</tr>
<tr>
<td>New York, NY</td>
<td>$39,259</td>
</tr>
<tr>
<td>Nassau-Suffolk, NY</td>
<td>$40,353</td>
</tr>
<tr>
<td>Non-Metropolitan Portion</td>
<td>$22,700</td>
</tr>
</tbody>
</table>

### Highway Centerline Mileage by Jurisdiction (2000)

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total State and Local</td>
<td>112,715</td>
</tr>
<tr>
<td>State DOT</td>
<td>15,026</td>
</tr>
<tr>
<td>County</td>
<td>20,399</td>
</tr>
<tr>
<td>City/Town/Village</td>
<td>75,829</td>
</tr>
<tr>
<td>Other State Maintained</td>
<td>1,461</td>
</tr>
</tbody>
</table>

### Estimated Vehicle-Miles Traveled, All Roads

<table>
<thead>
<tr>
<th>Year</th>
<th>VMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>128.7 billion</td>
</tr>
</tbody>
</table>

| Annual Growth 1990-2000       | 1.9%    |

### Highway Bridge Ownership by Jurisdiction (2000)

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total in NYS</td>
<td>17,375</td>
</tr>
<tr>
<td>State DOT</td>
<td>7,598</td>
</tr>
<tr>
<td>County/City/Village</td>
<td>8,621</td>
</tr>
<tr>
<td>Public Authorities/Parkways/Private</td>
<td>1,156</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Registrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>10,661,161</td>
</tr>
<tr>
<td>Automobiles</td>
<td>8,678,140</td>
</tr>
<tr>
<td>Commercial Vehicles</td>
<td>1,186,620</td>
</tr>
<tr>
<td>Trailers</td>
<td>389,923</td>
</tr>
<tr>
<td>Motorcycles/Mopeds</td>
<td>210,962</td>
</tr>
<tr>
<td>Buses</td>
<td>20,653</td>
</tr>
<tr>
<td>Taxis</td>
<td>69,932</td>
</tr>
<tr>
<td>Rentals</td>
<td>93,865</td>
</tr>
<tr>
<td>Farm Vehicles/Ambulances</td>
<td>11,066</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Region</th>
<th>Per-Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide</td>
<td>0.56</td>
</tr>
<tr>
<td>New York City</td>
<td>0.26</td>
</tr>
<tr>
<td>Remainder of State</td>
<td>0.77</td>
</tr>
</tbody>
</table>

**Licensed Drivers (2000)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>10,871,344</td>
</tr>
<tr>
<td>Male</td>
<td>5,706,569</td>
</tr>
<tr>
<td>Female</td>
<td>5,164,775</td>
</tr>
<tr>
<td>New York City</td>
<td>3,162,734</td>
</tr>
<tr>
<td>Remainder of State</td>
<td>7,708,610</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Category</th>
<th>1990</th>
<th>2000</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers Residing in NYS</td>
<td>8,220,613</td>
<td>8,211,916</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Working outside home</td>
<td>8,007,391</td>
<td>7,964,047</td>
<td>-0.5%</td>
</tr>
<tr>
<td>Working at home</td>
<td>213,222</td>
<td>247,869</td>
<td>14.0%</td>
</tr>
</tbody>
</table>

**Persons Working in NYS**

| Total                         | 8,412,879 | 8,460,460 | 0.6%    |

**National Household Transportation Survey (2001)**

<table>
<thead>
<tr>
<th>Category</th>
<th>U.S.</th>
<th>New York State</th>
<th>% of U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person-Trips (billions)</td>
<td>411.0</td>
<td>24.9</td>
<td>6.1</td>
</tr>
<tr>
<td>Person Vehicle Trips (billions)</td>
<td>234.9</td>
<td>10.9</td>
<td>4.6</td>
</tr>
<tr>
<td>Person-Miles of Travel (billions)</td>
<td>4,026.2</td>
<td>194.5</td>
<td>4.8</td>
</tr>
<tr>
<td>Person Vehicle-Miles Traveled (billions)</td>
<td>2,281.9</td>
<td>95.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Average Trip Length (miles)</td>
<td>9.8</td>
<td>8.2</td>
<td>NA</td>
</tr>
<tr>
<td>Average Vehicle Occupancy (persons)</td>
<td>1.6</td>
<td>1.5</td>
<td>NA</td>
</tr>
<tr>
<td>Population (5 years or older, millions)</td>
<td>277.2</td>
<td>18.6</td>
<td>6.7</td>
</tr>
<tr>
<td>Total Licensed Drivers (millions)</td>
<td>190.3</td>
<td>11.2</td>
<td>5.9</td>
</tr>
<tr>
<td>Workers in Households (millions)</td>
<td>145.0</td>
<td>9.6</td>
<td>6.6</td>
</tr>
<tr>
<td>Total Households (millions)</td>
<td>107.4</td>
<td>7.2</td>
<td>6.7</td>
</tr>
<tr>
<td>Total Vehicles in Households (millions)</td>
<td>203.9</td>
<td>9.5</td>
<td>4.7</td>
</tr>
</tbody>
</table>
Public Transportation System Statistics (Calendar Year 2000)

Public Transportation Systems 99
Public Transportation Providers 124
Public Buses 8,931
Public Rail Cars 7,830
Miles of Subway/Light-Rail and Commuter Rail Tracks 2,423

Revenue Passengers 2,492,102,935
  Bus 951,631,475
  Subway/Light-Rail 1,385,191,735
  Commuter Rail 136,778,674
  Ferry 18,501,051

Revenue Vehicle Miles of Service 679,077,745
  Bus 247,166,719
  Subway/Light-Rail 335,260,189
  Commuter Rail 96,486,452
  Ferry 164,385

Commercial Service Airports 18
General Aviation Public Use Airports 129
NYS Air Passenger Boardings (2000) 36,974,012
Amtrak Passengers (2000) 1,421,244

Freight Movements on NYS Transportation Systems (1997)

<table>
<thead>
<tr>
<th></th>
<th>Value (millions)</th>
<th>Tons (thousands)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Modes (net domestic)</td>
<td>$513,366</td>
<td>390,569</td>
</tr>
<tr>
<td>Trans-border NYS/Canada</td>
<td>$31,293</td>
<td>11,024</td>
</tr>
<tr>
<td>Waterborne Freight</td>
<td>Not reported</td>
<td>104,685</td>
</tr>
</tbody>
</table>

* May not be mutually exclusive, double counting may exist
2. POPULATION AND EMPLOYMENT

Over the last 20 years, New York State’s population has increased slightly to about 19 million (Figure 2). Figure 3 shows age distribution of that population in 2000 by seven age groups - more than half are between 20 and 54 years old, more than a quarter younger than 20, and slightly more than one-in-five older than 55.

Although New York’s population has stabilized, its distribution within the State has changed, especially since World War II (Figure 4). Between 1950 and 1970, Long Island’s population rose from 950,000 to more than 2.5 million. Over the past 50 years, New York City’s population has remained between 7 and 8 million, while Hudson Valley and Upstate areas have steadily increased.

Population mobility is shown in Figure 5 -- 38% of New Yorkers changed residence location between 1995 and 2000, while 62% remained within their 1995 county of residence.

Figure 6 shows changes in NYS employment by industry from 1990 to 2000. (Note that the data do not include those working at home or self-employed.) Figure 7 shows New York State non-farm employment by industry as compared to the nation.
Figure 2. Decennial Census state population: 1900-2000.

Figure 3. Age distribution of state and national populations: 2000.
Figure 4. NYS Population by geographic area.

1930 (12.6 million)

- Hudson Valley: 7.6%
- LI: 3.7%
- Upstate: 33.7%
- NYC: 55.0%

1950 (14.8 million)

- Hudson Valley: 7.8%
- LI: 6.4%
- Upstate: 32.6%
- NYC: 53.2%

1970 (18.2 million)

- Hudson Valley: 10.0%
- LI: 14.0%
- Upstate: 32.7%
- NYC: 43.3%

1990 (18.0 million)

- Hudson Valley: 11.2%
- LI: 14.5%
- Upstate: 33.6%
- NYC: 40.7%

2000 (19.0 million)

- Hudson Valley: 10.5%
- LI: 14.5%
- Upstate: 32.8%
- NYC: 42.2%
Figure 5. Population mobility (persons 5 years or older): 1995-2000.

United States (262.4 million)
- Same House: 54.1%
- Same County: 24.9%
- Within State: 9.7%
- In USA: 8.4%
- Abroad: 2.9%

New York State (17.7 million)
- Same House: 61.8%
- Same County: 21.8%
- Within State: 8.2%
- In USA: 4.1%
- Abroad: 4.1%

Upstate (5.8 million)
- Same House: 60.5%
- Same County: 24.4%
- Within State: 8.9%
- In USA: 4.8%
- Abroad: 1.4%

Downstate (11.9 million)
- Same House: 62.4%
- Same County: 20.6%
- Within State: 7.9%
- In USA: 3.7%
- Abroad: 5.4%
Figure 6. NYS non-farm employment *, state and nation: 1990-2000.

Figure 7. Non-farm employment *, state and nation: 2000.

* SIC based, does not include agriculture, mining and unclassified or self-employed
3. HIGHWAYS AND THEIR USERS

New York State is unique among the 50 states, not only in diversity of transportation facilities but also in per capita highway usage. Population density and the lack of parking in New York City discourage vehicle ownership -- according to Census Bureau reports, one-fifth (1.3 million) of all households in the country having no vehicles are in New York City. Further, based on the Federal Highway Administration’s (FHWA) 2001 Highway Statistics and New York State Department of Motor Vehicles reports, only 39.5% of New York City residents are licensed, compared to 73.2% in the nation. Figure 8 which compares driving age populations across the most populous states, shows New York State’s personal transportation use and energy consumption are the lowest in terms of licensed drivers per 1000, registered vehicles per 1000, annual fuel usage and vehicle-miles traveled. As Figure 1 shows, New York is first (lowest, in this case) when it comes to fuel usage per person and VMT per person: it averages 310 gallons per capita compared to the national average of 506 gallons per capita and accumulates about 7,000 miles per person annually compared to the US average of 10,000 miles.

The number of persons having a driver license has gradually increased since 1971, and appears to have flattened out (Figure 9). Vehicle registrations, which jumped by more than 40% during the 1970s and 1980s, may be reaching saturation, remaining less than 11 million between 1990 and 2000. The category showing greatest increase has been the number of vehicle-miles-traveled (VMT) on the State’s highways. VMT has risen every year since 1980, by more than 60 billion miles since 1971 to 128.7 billion in 2000. As reported in FHWA’s 2000 Highway Statistics, New York State ranks fourth in VMT nationally after California, Texas, and Florida. Fuel use (Figure 9) has declined since 1975 from 618 gallons per licensed driver to 513 in 2000, reflecting the greater fuel efficiency of today’s automobiles. Fuel use has not risen proportionally with VMT, further reflecting improved fuel efficiency since the mid-1970s (Figure 9). It is interesting to observe that of the variables plotted, VMT in New York State most closely tracks economic performance as measured by GDP.

Total centerline mileage of public roads in New York State as reported in the 2000 Highway Mileage Report for New York State is 112,715. While only 14.6% of this mileage is under State jurisdiction (including State parkways and authorities), these facilities carry 52.0% of the State’s total VMT. Urban roadways carried nearly three-quarters of VMT in 2000, but the State’s rural VMT (36.5 billion miles) is tenth highest in the nation. Figure 10 shows the VMT breakdown by jurisdiction, federal-aid category and by urban-rural ratio. New York State has 18,966 lane miles (5,140 centerline miles) of National Highway System (NHS) mileage (see Fig. 11 for the NHS map). Shown as blue lines on the NHS map, the State’s Interstate centerline mileage (1,667) ranks fifth among states, rising from sixth due to the I-86 designation in 1999.

One of the more spectacular achievements in recent years has been the decline in fatalities per 100 million VMT on all public roads (Figure 12). From 4.8 deaths per 100 million VMT in 1967, the fatality rate had dropped to 1.1 in 2000 -- a decline of 77.1%! Many factors contributed to this improvement, including safer vehicles, better-engineered roadways, mandatory use of seat belts, and tougher drunken-driving sanctions. New York’s fatality rate (1.1 per 100 million VMT) in 2000 ranked in the top 6 best among the states and better than the national rate of 1.5 per 100 million VMT.
Figure 8. Licenses, vehicle registrations, gasoline usage, and VMT per driving age population in the most populous states: 2000.
Figure 9. Vehicle registrations, gasoline sales, licenses, annual VMT, and Gross Domestic Product: 1971-2000.*

* To facilitate display in Figure 9, all data series have been indexed to show 1971 values = 100. GDP for all years is reported in real 1996 dollars.
Figure 10. State VMT by jurisdiction, federal-aid category and urban-rural ratio: 2000.

VMT by federal-aid category
Total Vehicle - Miles = 128.7 billion

- Non-Fed Aid: 21.0%
- Other NHS*: 21.7%
- Interstate NHS*: 18.9%
- Other Fed Aid: 38.4%

*NHS is National Highway System

VMT urban-rural
Total Vehicle - Miles = 128.7 billion

- Urban: 71.6%
- Rural: 28.4%

VMT by Jurisdiction
Total Vehicle - Miles = 128.7 billion

- State DOT: 44.4%
- Other State*: 7.6%
- Local: 48.0%

*Other includes Parkways, Authorities, etc.
Figure 11. National Highway System in New York State: 2001
Figure 12. State and national fatalities per 100 million VMT: 1967-2002.
4. JOURNEY-TO-WORK AND PERSONAL TRAVEL

According to the 2000 Census, each weekday more than 8 million residents use the State’s highways and bridges/tunnels, and its buses, subways, trains, and ferries for their journey-to-work (JTW). More than 3.7 million people work in New York City, in fact, more than 2 million work in the Borough of Manhattan alone, with 70% coming from outside Manhattan.

Figure 13b, using data derived from the Census 2000 survey (long form), shows the mode choices for JTW in the United States, New York State, New York City (City), and the rest of NYS (excluding the City). The graph shows how modes used by City residents for their JTW skew data for the entire state; in 2000, about a quarter (24.9%) drove alone, but more than half (52.8%) used a bus, train or subway. Effects of City residents’ JTW choices are apparent in state percentages of “drive-alone” (56.4%) and public transportation (24.4%), compared to corresponding national percentages of 75.7% and 4.7%. If the City is excluded, the rest of New York State resembles national mode choices for JTW “drive-alone” (76.2%) and public transportation (6.4%).

Figure 14 shows one of the greatest problems facing planners and environmentalists today: more than half the resident workers in New York State drove alone to work in 2000 -- 56.4% compared to 54.2% in 1990 (Figures 13a, 13b and 14). Despite the rise in single-occupant vehicles for work trips, New York State continues to lead the nation in percentage of persons using rail and public transportation to get to work (24.4% for NYS compared to 4.7% for the US), as well as those who walk/bike to work (6.5% versus 3.3%).

Times required for JTW are shown in Figure 15. The upstate-downstate contrast is dramatic -- three-quarters of those living upstate arrive at work within 30 minutes, but downstate less than half do. Of those living in New York City, slightly more than one-third make the journey in 30 minutes, but almost one-quarter need an hour or more. Statewide, the average JTW takes nearly 29 minutes, but in Upstate the average is 22 minutes, in the Hudson Valley 32 minutes, on Long Island 33 minutes, and in New York City 40 minutes.

Figures 16 and 17 show personal travel by all destination purposes and modes, as summarized in the NYS expanded sample of households from the 2001 National Household Transportation Survey (NHTS). Figures 13 to 15 are from Census data and reflect only those respondents who indicated that they worked the week preceding the Census. The NHTS summarizes all personal travel by specific trip destination purpose, so one Census journey to work trip may correspond to a series of NHTS intermediate trips with different purposes, such as school, personal business and then work as the final destination. Hence, the two sources do not give comparable results.

According to the 2001 NHTS, New York State residents made more than 24.9 billion person-trips. Of these person-trips, only 11.5% had a trip-end workplace destination. Slightly more than a third (34.3%) reflected return to “home” from some other site or activity (shopping, church, work, etc.) Two-thirds of all New York State person-trips were in personal vehicles. Walking accounted for 20.8% of all person-trips by mode, and mass transit (subway, train, bus) was the mode choice of 9.9% of New York State person trips.
Figure 13a. Means of transportation to work from residence: 1990.

Number of Workers 16 and over

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Workers</th>
</tr>
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<tbody>
<tr>
<td>US</td>
<td>115.3 (million)</td>
</tr>
<tr>
<td>NYS</td>
<td>8.2 (million)</td>
</tr>
<tr>
<td>New York City</td>
<td>3.2 (million)</td>
</tr>
<tr>
<td>NYS w/o New York City</td>
<td>5.0 (million)</td>
</tr>
</tbody>
</table>
Figure 13b. Means of transportation to work from residence: 2000

New York City residents
- Drive alone: 24.9%
- Carpool: 8.0%
- Transit: 52.8%
- Walk/bike: 10.9%
- Other: 2.9%
- Work@home: 0.5%

NYS residents, excluding New York City
- Drive alone: 76.2%
- Carpool: 10.0%
- Transit: 6.4%
- Walk/bike: 3.8%
- Other: 3.1%
- Work@home: 0.5%

New York State
- Drive alone: 56.4%
- Carpool: 9.2%
- Transit: 24.4%
- Walk/bike: 6.5%
- Other: 0.5%
- Work@home: 3.0%

National
- Drive alone: 75.7%
- Carpool: 12.2%
- Transit: 4.7%
- Walk/bike: 3.3%
- Other: 0.8%
- Work@home: 3.3%

Number of Workers 16 and over

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>128.3 (million)</td>
</tr>
<tr>
<td>NYS</td>
<td>8.2 (million)</td>
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<tr>
<td>New York City</td>
<td>3.2 (million)</td>
</tr>
<tr>
<td>NYS w/o New York City</td>
<td>5.0 (million)</td>
</tr>
</tbody>
</table>
Figure 14. Modes for Census journey-to-work: 1990 and 2000.

*Other includes motorcycle, airplane, work at home, etc.
**Includes Railroad

Figure 15. Census travel time to work (regional/state/national): 2000.

Travel Time (min)
- Red: 60+
- Blue: 30-59
- Green: 15-29
- Yellow: 1-14

Avg Travel Time (min)
- Nation: 26
- State: 32
- Upstate: 22
- Downstate: 37
- Hudson Valley: 32
- LI: 33
- NYC: 40
Figure 16. Person-trips by purpose: 2000.

- To Work: 7.9%
- Work related: 2.0%
- Return to Work: 1.6%
- Shopping: 13.6%
- School: 3.7%
- Religious: 1.3%
- Medical: 1.6%
- Pers. Bus.: 8.4%
- Give Ride: 5.6%
- Soc/Rec: 12.0%
- Eat: 6.4%
- Other: 1.6%
- Return Home: 34.3%

Figure 17. Person-trips by mode: 2000.

- Drive Alone: 28.9%
- Carpool: 36.9%
- Walk: 20.1%
- Bike: 0.7%
- Bus: 4.1%
- Train: 5.8%
- School Bus: 1.9%
- Other: 1.4%
- Not Determined: 0.1%
- Air: 0.1%
5. PUBLIC TRANSPORTATION, AIR AND RAIL TRAVEL

Public transportation -- bus, subway, commuter rail, ferry -- continues to have a major role in moving people in New York State (NYS). Figure 18 shows the service areas of New York’s public transportation systems while Figure 19 shows the revenue passengers and miles for the Upstate systems, the Metropolitan Transportation Authority (MTA) and the other Downstate systems. MTA subways, buses and commuter rail lines carry about 89% of the total transit passengers in the State. The MTA commuter lines – Metro-North and the Long Island Railroad (LIRR) – account for over 135 million annual passengers. Downstate public transportation ridership (including MTA shown separately, New York City private buses, and suburban bus systems) accounts for 97.3% of the statewide total. New York State’s public transportation operators provided 679.1 million revenue-miles of service on all modes, of which 550.4 million or 81.0% was provided by MTA. Figure 20 shows the trend in public transportation ridership since 1974.

New York State’s public transportation system is the most utilized in the nation. The graphs in this section, and Figures 13a and 13b in the previous section, give testimony to the importance of public transportation in moving people to their occupations, thus reducing highway congestion and air pollution in metropolitan areas. Of particular note is that more than 50% of resident workers in New York City use public transportation and rail. Based on the 2000 census, use of public transportation for resident journey-to-work in New York State is 33.1% of the national total. A clear example of the indispensable nature of New York’s public transportation system is how people arrive at work in Manhattan. On a typical workday, based upon workplace location data from the Census Transportation Planning Package (CTPP), more than 70% of all workers arrive at their jobs in Manhattan using public transportation. These workers are primarily NYS residents, but also include workers from New Jersey and Connecticut. Clearly, Manhattan’s economic vitality is directly linked to the existence of the State’s varied systems of public transportation.

Amtrak is an important presence in the State. In 2000, 1.42 million people traveled on its trains in the Empire Corridor and 22% of Amtrak’s national passengers traveled through NYS which ranks number 1 in the nation for passengers carried (Figure 1). The Albany-New York City portion of the Empire Corridor is the most heavily utilized. Figure 21 shows the recent trend in Amtrak ridership on the Empire Corridor.

New York State has 20 commercial airports. The number of boardings in NYS increased in 2000 to about 37 million, continuing the upward trend from the drop in the early 1990’s, with a period low of 29.5 million in 1991 (Figure 22). Because many air trips are business-related, boardings are quite sensitive to fluctuations in the economy. Figure 22 also shows boardings at New York City’s John F. Kennedy and LaGuardia Airports (the State’s largest airports), compared to all other commercial airports in New York State.
Figure 18. Public transit system service areas in New York State

Basemap Copyright NYSDOT 1998

Public transit service areas classified by system type

- Rural county and/or city transit systems
- Downstate authorities and large public and private transit systems
- Intercity bus routes
- Small urbanized transit systems
- Upstate transit authorities
Figure 19. Public transit revenue passengers and miles: CY 2000.

Statewide
Revenue Passengers 2.49 billion

MTA
Revenue Passengers 2.22 billion

Statewide
Revenue Vehicle Miles 679.1 million

MTA
Revenue Vehicle Miles 550.4 million

Percentages may not add to 100 due to rounding
Figure 20. NYS public transportation ridership trend.

Figure 21. NYS Empire Corridor Amtrak passengers: 1977-2001.
Figure 22. NYS airport boardings: 1980-2000.
6. FREIGHT MOVEMENTS

Three independent sources of data collected, analyzed, and distributed by the United States Department of Transportation’s Bureau of Transportation Statistics (BTS) were fused by NYSDOT to provide a reasonably comprehensive portrait of goods’ movement in the State: (1) The 1997 Commodity Flow Survey (CFS), which contains the value and tonnage of most products sold within the United States, but does not include foreign trade, crude petroleum and natural gas shipments, and/or many local transactions; (2) Trans-Border Surface Freight Transportation Data (TBSFTD), which has information on the value and tonnage of commodities of freight passing between the United States and Canada; and, (3) The US Waterway Data, which includes statistics on tonnage only (not value) for interstate, intrastate and US foreign trade conducted by waterborne vessels. Figure 23 indicates that $513.4 billion in goods were transported to/from/within New York State in 1997, according to the CFS. Most significant is the estimate that trucks carried 71.4% of the value, 91.7% of the tonnage, and 78% of the ton-mileage of commodities in or through New York State (Figure 24).

New York State plays a key role in the reciprocal trade between the United States and Canada. According to TBSFTD, $21.2 billion in commodities entered the U.S. from Canada through New York State’s border crossings. Although most of this trade entered the State through the western NY crossings, “the North Country” ports of entry, such as Champlain and Alexandria Bay, processed more than $7 billion in goods. With respect to U.S. exports to Canada, $10.1 billion in commodities were transported across the State’s international borders, representing 6.5% of U.S. exports to Canada (Figure 25).

As exhibited in Figure 26, trucks again transported the great majority of value between the two countries. (There is no data on tonnage). Trucks hauled 77.6% of all imports by value and 97.6% of the value of US exports from New York State. It should be noted, however, that the share of trade value borne by rail is considerably greater in TBSFTD than the corresponding figures in CFS. TBSFTD estimates that rail carried nearly one-quarter of the value of Canada’s exports and 8.7% of the imports through New York State’s ports-of-entry.

The United States Waterway Data indicate that New York State port facilities handled 88.3 million tons of goods (imports and exports, excluding 16.4 million tons waterborne freight moving intrastate) in 2000. Figure 27 shows the tonnage by origin and destination. The State imported nearly twice the amount of tonnage that it exported. The greatest difference is in the “Foreign” trade component which could be attributed to foreign petroleum imports.

As noted in Figure 1, New York is number 3 (behind California and Florida) in scheduled and non-scheduled air freight according to BTS with 628 thousand tons in 2002. Also, according to the FAA’s ACAIS database, JFK International Airport ranks 6th in the Nation based on cargo weight.
Figure 23. Comparison of 1993 and 1997 Commodity Flow Survey.  
NYS - Value and tonnage of goods movement

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<th>Key: directional detail</th>
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<tr>
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<tr>
<td>Tons (T)</td>
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</table>

<table>
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<th>NYS Commodity Flow</th>
<th>Value $ (000,000)</th>
<th>Value $ (000,000)</th>
<th>% Chg</th>
<th>Tons (000)</th>
<th>Tons (000)</th>
<th>% Chg</th>
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<tr>
<td>Combined Shipment Direction</td>
<td>1993</td>
<td>1997</td>
<td>% Chg</td>
<td>1993</td>
<td>1997</td>
<td>% Chg</td>
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<tr>
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<tr>
<td>To Other States</td>
<td>154,081</td>
<td>168,049</td>
<td>9.07</td>
<td>52,369</td>
<td>63,338</td>
<td>20.95</td>
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<td>To Within NYS</td>
<td>107,913</td>
<td>122,301</td>
<td>13.44</td>
<td>167,403</td>
<td>217,676</td>
<td>30.03</td>
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<td>Total</td>
<td>261,068</td>
<td>290,350</td>
<td>11.22</td>
<td>219,754</td>
<td>281,014</td>
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<tr>
<td>Originating Outside NYS</td>
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<tr>
<td>To NYS</td>
<td>187,014</td>
<td>223,016</td>
<td>19.25</td>
<td>119,080</td>
<td>109,555</td>
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<tr>
<td>Total NYS</td>
<td>448,082</td>
<td>513,366</td>
<td>14.57</td>
<td>338,834</td>
<td>390,569</td>
<td>15.26</td>
</tr>
</tbody>
</table>
Figure 24. Freight shipments by mode 1997.
From NYS to all other states*

*Includes shipments within N.Y.S. Multi-mode includes rail and air freight movements which have a truck component at one or more ends.

Source: U.S. Census Bureau, 1997 Economic Census, Transportation - Commodity Flow Survey
Figure 25. Trade with Canada 2000.

NYS border trade

NYS share of Canada - US trade.

Imports from Canada $210.3 Billion

Exports To Canada $154.8 Billion
Figure 26. NYS- Canada trade, imports and exports by mode: 2000

NY-Imports $21.2 billion
- Pipeline: 13.5%
- Rail: 8.8%
- Truck: 77.6%

NY-Exports $10.1 billion
- Rail: 2.4%
- Truck: 97.6%

Imports to NYS (tons)
Total imports 82.6 million tons
includes 16.4 million tons intrastate
- Foreign: 44.6%
- Canada: 9.5%
- Interstate: 26.1%
- Intrastate: 19.8%

Exports from NYS (tons)
Total exports 38.5 million tons
includes 16.4 million tons intrastate
- Interstate: 49.3%
- Canada: 1.4%
- Foreign: 6.7%
- Intrastate: 42.6%

Percentages may not add to 100 due to rounding
FIGURE DATA SOURCES

FIGURE 1 New York State’s Transportation rankings.
Data Source: various documents listed below
Source: NYSDOT Planning and Strategy Group

FIGURE 2 Decennial census state population: 1900 - 2000.
Source: NYSDOT Planning and Strategy Group

FIGURE 3 Age distribution of state and national populations: 2000.
Data Source: US Department of Commerce, Bureau of Census, 2000 Summary File #3
Source: NYSDOT Planning and Strategy Group

FIGURE 4 Population by geographic area.
Data Source: US Department of Commerce, Bureau of Census
Source: NYSDOT Planning and Strategy Group

FIGURE 5 Population mobility (persons 5 years or older): 1995 - 2000.
Data Source: US Department of Commerce, Bureau of Census, 2000 Summary File #3
Source: NYSDOT Planning and Strategy Group

Source: NYSDOT Planning and Strategy Group

FIGURE 7 Non-farm employment, state and nation: 2000.
Source: NYSDOT Planning and Strategy Group

FIGURE 8 Licenses, vehicle registrations, gasoline usage, and per-capita VMT: 2000.
Source: NYSDOT Planning and Strategy Group

Source: NYSDOT Planning and Strategy Group

FIGURE 10 State VMT by jurisdiction, federal-aid category and urban-rural ratio: 2000.
Source: NYSDOT Planning and Strategy Group

Data Source: NYSDOT Highway Data Services Bureau
FIGURE 12 State and national fatalities per 100 million VMT: 1970 - 2002.
Source: NYSDOT Planning and Strategy Group

Data Source: US Department of Commerce, Bureau of Census, 2000 Summary File #3
Source: NYSDOT Planning and Strategy Group

Data Source: US Department of Commerce, Bureau of Census, 2000 Summary File #3
Source: NYSDOT Planning and Strategy Group

FIGURE 15 Census travel time to work (regional/state/national): 2000.
Data Source: US Department of Commerce, Bureau of Census, 2000 Summary File #3
Source: NYSDOT Planning and Strategy Group

FIGURE 16 Person-trips by purpose: 2000.
Data Source: USDOT, FHWA, 2001 Nationwide Household Transportation Survey, NYS Summarization, unpublished tables
Source: NYSDOT Planning and Strategy Group

FIGURE 17 Person-trips by mode: 2001.
Data Source: USDOT, FHWA, 2001 Nationwide Household Transportation Survey, NYS Summarization, unpublished tables
Source: NYSDOT Planning and Strategy Group

FIGURE 18 Public transit system service areas in NYS
Data Source: NYSDOT Passenger Transportation Division
Source: NYSDOT Passenger Transportation Division

Data Source: NYSDOT Passenger Transportation Division, 2001 Annual Report on Public Transportation Assistance Programs in New York State, Tables III 1-4
Source: NYSDOT Planning and Strategy Group

Data Source: NYSDOT Passenger Transportation Division, 2001 Annual Report on Public Transportation Assistance Programs in New York State, Tables III 1-4
Source: NYSDOT Planning and Strategy Group

Data Source: NYSDOT Freight and Economic Development Division, Unpublished Tables
Source: NYSDOT Planning and Strategy Group

FIGURE 23  Comparison of 1993 and 1997 Commodity Flow Surveys
Source: NYSDOT Planning and Strategy Group

FIGURE 24  Freight shipments by mode: 1997
Data Source: US Department of Commerce, 1997 Census of Transportation, Communications and Utilities, Commodity Flow Survey
Source: NYSDOT Planning and Strategy Group

FIGURE 25  Trade with Canada 2000
Source: NYSDOT Planning and Strategy Group

FIGURE 26  NYS-Canada trade, imports and exports by mode 2000
Data Source: USDOT, Bureau of Transportation Statistics, Trans-border Surface Freight Transportation Data 2000
Source: NYSDOT Planning and Strategy Group

FIGURE 27  Waterborne freight movements 2000
Data Source: USDOT, Bureau of Transportation Statistics, 2000 United States Waterway Data
Source: NYSDOT Planning and Strategy Group
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