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## **Manhattan River Crossings 2004**

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## **INTRODUCTION**

The 2004 *Manhattan River Crossings* report is an annual publication prepared by the New York City Department of Transportation (NYCDOT), and funded by the Unified Planning Work Program (UPWP), and the Transportation Equity Act of the 21<sup>st</sup> Century (TEA-21).

Since 1948, the City of New York has been monitoring traffic flow over the 20 bridges and tunnels serving Manhattan. The *Manhattan River Crossings* report, published annually by the New York City Department of Transportation (NYCDOT) since 1972, presents vehicular volumes, classification, and trends for all bridge and tunnel facilities serving Manhattan. All toll-free bridges are monitored with automatic traffic recording (ATR) machines during the fall season.

The average hourly volumes by direction for 2004 are presented in histograms for each facility. Trends were developed from a regression analysis of volumes from 1948 to 2004. The annual growth rate was derived from the linear regression equation that reflects the best fitting straight line. The total vehicular flow to and from Manhattan has been summarized similarly with growth curves, hourly histograms, and a graph of vehicle accumulation in Manhattan. The statistical analysis presented in the report was performed by Subregional Transportation Planning Program staff of NYCDOT during the 2004-2005 and 2005-2006 program years.

NYCDOT extends its appreciation to the Port Authority of New York and New Jersey (PANYNJ), the Metropolitan Transportation Authority Bridges and Tunnels (MTABT), and the New York City Department of City Planning (NYC DCP) for their assistance in the data collection process.

## SUMMARY

## **2004 Daily Traffic**

- Daily Manhattan river crossings rose 0.6%, to 1,908,600 in fall 2004 from 1,897,400 in fall 2003, an increase of 11,200 daily vehicles. This was 11.4% more than the depressed level of 1,713,000 daily vehicles recorded in fall 2001 shortly after the events of 9/11/2001, and only 46,900 fewer daily vehicles than the all-time record of 1,955,500 recorded during fall 2000 (prior to the events of 9/11/2001).
- During the 7-8 am morning peak hour, 67,400 vehicles entered Manhattan. During the 5-6pm evening peak hour, 66,400 vehicles exited.
- For the 43rd consecutive year, the George Washington Bridge carried more traffic than any other river crossing serving Manhattan. Some 315,100 daily vehicles used this bridge in fall 2004, which was 1.2% fewer than the average daily volume of 319,000 in fall 2003.
- For the eighth consecutive year, the Queensboro Bridge was the second busiest river crossing, serving 180,400 daily vehicles in fall 2004, which was 2.5% fewer than the fall 2003 daily volume of 185,000. The Alexander Hamilton Bridge, which had been in second place continuously from 1978 to 1996, was third busiest, as its daily volume decreased 4.0%, to 175,300 in fall 2004 from 182,700 in fall 2003.
- The average automobile entering Manhattan during the morning peak period carried 1.4 persons including the driver. A total of 78% of peak period automobiles were occupied only by the driver.
- The peak accumulation of motor vehicles in Manhattan on an average weekday occurred at about 2 pm when an estimated 368,700 vehicles were either moving or parked on the island. This includes vehicles operating only within Manhattan as well as those entering via the river crossings.

## **Recent Trends**

- In 2004, Manhattan river crossings increased 0.6%, to 1.909 million daily vehicles. Volumes increased on ten of the twenty river crossings.
- Volumes on the East River bridges continued to rebound from the major decline caused by the events of 9/11/2001, which had severely restricted traffic flow into lower Manhattan. Daily traffic on the four East River bridges rose 2.9%, to 507,600 in fall 2004 from 493,400 in fall 2003. This was only 7,200 fewer daily vehicles using the four East River bridges than the 514,800 that had been recorded in fall 2000 (prior to the events of 9/11/2001).
- Annual subway ridership citywide increased 3.0% to 1.426 billion in 2004 from 1.384 billion in 2003.

## Ten-Year Trends (1994-2004)

- In the ten-year period from 1994 to 2004, Manhattan traffic volume has risen 11.5%, to 1,908,600 from 1,711,500, an increase of 197,100 daily vehicles.
- Daily vehicle trips entering Manhattan were 10.0% higher in 2004 than in 1994. The biggest increase in inbound trips occurred during the 1-4am period, which rose 36.3% during the decade. Trips leaving Manhattan increased 13.1% since 1994. The biggest outbound increase also occurred during the 1-4am period (+33.6%).
- Vehicle trips on the 13 toll-free East and Harlem River bridges grew at an average annual rate of 0.5% per year from 1994 to 2004. The highest average annual growth rate was on the Madison Avenue Bridge: +9.8% per year. The greatest volume increase occurred on the Queensboro Bridge (28,900 more daily vehicles in 2004 than in 1994). The Third Avenue Bridge had the highest annual rate of decline: -3.0% per year.
- Traffic volumes on the four MTA Bridges and Tunnels (MTABT) river crossings serving Manhattan increased at an average annual rate of 1.1% per year since 1994. The highest average annual growth rate was on the Henry Hudson Bridge (+2.5% per year). The largest volume increase was on the Triborough Bridge (+18,400 vehicles per day).
- Traffic volumes on the three trans-Hudson Port Authority of New York and New Jersey (PANYNJ) river crossings serving Manhattan increased 1.1% per year since 1994. The highest average annual growth rate was at the George Washington Bridge (+2.1% per year), which also had the biggest volume increase (+55,200 vehicles per day).
- New York City motor vehicle registrations increased 0.1% per year. In Manhattan, registrations increased 1.0% per year.

## **Historical Trends**

- During the 25 years following 1948, motor vehicle traffic to and from Manhattan increased 2.9% per year. By 1973 it had reached 1.493 million daily trips. Gasoline shortages arising from the first OPEC oil crisis contributed to traffic declining by 1.5% per year between 1973 and 1976. In 1977 and 1978, traffic growth resumed at 2.3% per year. Another OPEC crisis caused traffic to decline 2.4% in 1979. The 1980s brought new growth at 2.9% per year until 1987, when traffic volume declined by less than 1%. This slow downward trend continued through 1994. This was followed by increases of 3.0% in 1995, 0.4% in 1996, 4.4% in 1997, 2.9% in 1998, 1.7% in 1999, and 1.2% in 2000 (to an all time record of 1.956 million).
- In fall 2001, very shortly after the events of 9/11, daily volume decreased 12.4%, to 1.713 million. There were extensive restrictions on vehicle entries into Manhattan following the events of 9/11/2001. In fall 2002, daily volume rebounded by 8.4%, to 1,857 million. In fall 2003, daily volume rose an additional 2.2%, to 1.897 million. During fall 2004, daily volume rose another 0.6%, to 1.909 million.
- Between 1948 and 2004, daily vehicle trips to and from Manhattan rose 185%, to 1,908,600 from 670,000 (1,238,600 additional daily trips). The biggest growth was on the PANYNJ's three trans-Hudson facilities, where traffic climbed by 363%. Traffic rose 100% on the four toll-free East River bridges, 167% on the nine toll-free Harlem River bridges, and 236% on the MTABT's four toll crossings.

- Between 1954 and 1964, daily traffic growth to and from Manhattan averaged 2.3% per year. The largest annual growth rates occurred on the Brooklyn Bridge (+8.0%), on the Third Avenue Bridge over the Harlem River (+5.7%), and at the Queens-Midtown Tunnel (+5.2%). The largest annual decline was on the Manhattan Bridge, where daily traffic decreased 3.4% per year.
- Between 1964 and 1974, daily traffic growth to and from Manhattan averaged 1.7% per year. The largest annual growth rates occurred on the George Washington and Alexander Hamilton Bridges, +4.5% and +3.7%, respectively. The biggest annual decline was on the 145<sup>th</sup> Street Bridge over the Harlem River (-2.4% per year).
- Between 1974 and 1984, traffic growth on all Manhattan crossings averaged 1.4% per year. The largest annual growth rates were at the Triborough Bridge (+2.8%) and the Brooklyn-Battery Tunnel (+2.4%). The biggest annual decline was on the Queensboro Bridge (-1.1% per year).
- Between 1984 and 1994, traffic growth on all Manhattan river crossings averaged 0.1% per year. The largest annual growth rates were on the Henry Hudson Bridge (+3.8%) and through the Holland Tunnel (+2.8%). The largest annual declines were on the Macombs Dam and Madison Avenue Bridges, where daily traffic decreased by 2.6% and 2.4% per year, respectively.
- During the 56-year period from 1948 to 2004, average daily Manhattan vehicular river crossings rose 185%, to 1,908,600 from 670,000. During the same period, annual citywide subway ridership declined by 30%, to 1,426,000,000 from 2,031,000,000.

## **Origin-Destination**

- According to the 2000 census data, 45% of all automobile work trips ending in Manhattan originated in the other four boroughs, 44% came from outside the city, and the remaining 11% originated within Manhattan.
- Origin and Destination (O & D) surveys conducted by PANYNJ in 1989 at its trans-Hudson crossings show that 40% of all automobiles entering Manhattan from New Jersey each day have final destinations outside Manhattan. Similar surveys conducted in 1991 show that 78% of the trucks entering from New Jersey have final destinations outside Manhattan. These figures indicate that 109,950 autos and trucks entering Manhattan from New Jersey in 2004 each day were simply passing through.
- PANYNJ's O & D surveys show that 79% (87,100 vehicles) of all daily "through-Manhattan" auto and truck trips from New Jersey use the George Washington Bridge and the Trans-Manhattan Expressway. The remaining 21% (22,850 vehicles) use the Lincoln and Holland Tunnels and proceed across Manhattan along congested City streets.
- PANYNJ reports show that 67% (31,175 automobiles) of morning peak period (7-10 am) automobiles entering from New Jersey have final destinations in Manhattan.

#### **2004 Bridge and Tunnel Reconstruction**

#### **Brooklyn Bridge**

Eastbound lane closures were in effect as follows.

01/01-07/23:	10:00am - 3:00pm	Mon-Fri	1 e/b lane closed intermittently,
	6:00am - 2:00pm	Sat	1 e/b lane closed intermittently.
07/24-12/31:	1	Mon-Fri Mon-Fri Sat	1 e/b lane closed intermittently, 1 e/b lane closed intermittently, 1 e/b lane closed intermittently.
02/06-02/09:	11:00pm Fri - 6:00am	Mon	1 e/b lane closed,
	4:00am - 10:00am	Sat	2 e/b lanes closed,
	2:00am - 7:00am	Sun	2 e/b lanes closed,
	12:01am - 6:00am	Mon	2 e/b lanes closed.
09/07-09/08:	2:00am - 6:00am	Tue-Wed	2 e/b lanes closed.

Westbound lane closures were in effect as follows.

01/10-01/11: 10	0:00am - 2:00pm	Mon-Fri	1 w/b lane closed intermittently.
01/12-01/23: 10 12	1		1 w/b lane closed intermittently, 2 w/b lanes closed intermittently.
04/17-10/15: 1	1:00pm - 6:00am	Mon-Fri	1 w/b lane closed intermittently.
	1		1 w/b lane closed intermittently, 2 w/b lanes closed intermittently.
10/31: 12	2:01am - 9:00am	Sun	2 w/b lanes closed.
11/13-12/31: 1	1:00pm - 6:00am	Mon-Fri	1 w/b lane closed intermittently.
12 04/17-10/15: 1 10/16-11/12: 10 10/31: 12	2:01am - 5:00am 1:00pm - 6:00am 0:00am - 2:00pm 2:01am - 5:00am 2:01am - 9:00am	Mon-Fri Mon-Fri Mon-Fri Mon-Fri Sun	<ul> <li>2 w/b lanes closed intermitten</li> <li>1 w/b lane closed intermittent</li> <li>1 w/b lane closed intermittent</li> <li>2 w/b lanes closed intermitten</li> <li>2 w/b lanes closed.</li> </ul>

From September 18 to October 10, the westbound entrance ramp from the Brooklyn-Queens Expressway was closed Saturdays between 12:01am-6:00am and Sundays between 12:01am-9:00am. The entrance ramp from either Sands Street or from Tillary Street was also closed during these times.

On Sunday, October 31, from 12:01am to 9:00am, either the Tillary Street entrance or the Sands Street entrance (one at a time) was closed.

Throughout 2004, there were additional intermittent closings of single lanes in both directions on the Brooklyn Bridge during off-peak hours.

#### Manhattan Bridge

From January 1 to July 9, **pedestrian and bicycle access** was provided on the south side of the Manhattan Bridge, on an interim roadway.

From July 10 to July 23, **pedestrian and bicycle access** was provided on the north side of the Manhattan Bridge.

From July 24 to December 31, **bicycle access** was on the north side of the bridge and **pedestrian access** was on the south side of the Manhattan Bridge.

From January 1 to April 25, either the **Lower Roadway or South Upper Roadway** was closed intermittently weeknights between 9:00pm and 5:00am for installation of overhead message board structure. Only one of these two roadways was closed at any specific time, leaving two operating traffic lanes in each direction.

#### Manhattan Bridge Operation: January 1 – April 25, 2004.

South Upper Roadway or Lower Roadway closed intermittently weeknights 9:00pm - 5:00am for installation of overhead message board structure.

One or two of the three lanes on the reversible Lower Roadway closed as noted.

Four peak direction lanes on weekdays.

- Mon-Fri 5:00am 10:00am.
  - Manhattan-bound: 4 lanes: 2 on North Upper Roadway,
    - 2 on Lower Roadway.
  - Brooklyn-bound: 2 lanes on South Upper Roadway.
  - One Lower Roadway lane closed.

#### • Mon-Fri 10:00am – 1:00pm.

- Manhattan-bound: 3-4 lanes: 2 on North Upper Roadway,
  - 1 or 2 on Lower Roadway.
- Brooklyn-bound: 2 lanes on South Upper Roadway.
- One or two Lower Roadway lanes closed.

#### • Mon-Fri 1:00pm – 3:00pm.

- Manhattan-bound: 2 lanes on North Upper Roadway.
- Brooklyn-bound: 3-4 lanes: 2 on South Upper Roadway,
  - 1 or 2 on Lower Roadway.
- One or two Lower Roadway lanes closed.

#### • Mon-Fri 3:00pm – 9:00pm.

- Brooklyn-bound:

- Manhattan-bound: 2 lanes on North Upper Roadway.
  - 4 lanes: 2 on South Upper Roadway,
  - 2 on Lower Roadway.

- One Lower Roadway lane closed.

#### • Mon-Fri 9:00pm – 5:00am.

- Manhattan-bound: 2 lanes on North Upper Roadway.
- Brooklyn-bound: 2-4 lanes: 2 on South Upper Roadway,
  - and/or 2 on Lower Roadway.
- South Upper Roadway or Lower Roadway closed intermittently for installation of overhead message board structure.

#### • All other times.

- Manhattan-bound: 2 lanes on North Upper Roadway.
- Brooklyn-bound: 3-4 lanes: 2 on South Upper Roadway,

1 or 2 on Lower Roadway.

- One or two Lower Roadway lanes closed.

#### Manhattan Bridge Operation: April 26 - May 27, 2004.

Flatbush Avenue approach to Manhattan-bound North Upper Roadway closed round-the-clock, with traffic routed to the Lower Roadway. Access from the Brooklyn-Queens Expressway to the Manhattan-bound North Upper Roadway was not affected.

One or two of the three lanes on the reversible Lower Roadway closed as noted.

*Five Manhattan-bound lanes weekdays 5:00-10:00am; four Brooklyn-bound lanes weekdays 3:00-9:00pm.* 

- Mon-Fri 5:00am 10:00am.
  - Manhattan-bound: 5 lanes: 2 on North Upper Roadway, 3 on Lower Roadway.
    Brooklyn-bound: 2 lanes on South Upper Roadway.
- Mon-Fri 10:00am 3:00pm.
  - Manhattan-bound: 4 lanes: 2 on North Upper Roadway, 2 on Lower Roadway.
  - Brooklyn-bound: 2 lanes on South Upper Roadway.
  - One Lower Roadway lane closed.

#### • Mon-Fri 3:00pm - 9:00pm.

- Manhattan-bound: 2 lanes on North Upper Roadway.
- Brooklyn-bound: 4 lanes: 2 on South Upper Roadway,

2 on Lower Roadway.

- One Lower Roadway lane closed.

#### • Mon-Fri 9:00pm - 5:00am.

- Manhattan-bound: 3 lanes: 2 on North Upper Roadway,
  - 1 on Lower Roadway.
- Brooklyn-bound: 2 lanes on South Upper Roadway.
- Two Lower Roadway lanes closed.

#### • All other times.

- Manhattan-bound: 3-4 lanes: 2 on North Upper Roadway,
  - 1 or 2 on Lower Roadway.
- Brooklyn-bound: 2 lanes on South Upper Roadway.
- One or two Lower Roadway lanes closed.

#### Manhattan Bridge Operation: May 28 – December 31, 2004.

Flatbush Avenue approach to Manhattan-bound North Upper Roadway reopened May 28 (had been closed round-the-clock since April 26).

One or two of the three lanes on the reversible Lower Roadway closed as noted.

Four peak direction lanes on weekdays (5:00-10:00am Manhattan-bound, 3:00-9:00pm Brooklyn-bound).

• Mon-Fri 5:00am - 3:00pm.

- Manhattan-bound: 4 lanes: 2 on North Upper Roadway,

2 on Lower Roadway.

- Brooklyn-bound: 2 lanes on South Upper Roadway.
- One Lower Roadway lane closed.

#### • Mon-Fri 3:00pm - 9:00pm.

- Manhattan-bound: 2 lanes on North Upper Roadway. - Brooklyn-bound:

2 on South Upper Roadway. 4 lanes:

2 on Lower Roadway.

- One Lower Roadway lane closed.
- Mon-Fri 9:00pm 5:00am.
  - Manhattan-bound: 2 lanes on North Upper Roadway.
  - Brooklyn-bound: 3 lanes: 2 on South Upper Roadway,

1 on Lower Roadway.

- Two Lower Roadway lanes closed.
- All other times.
  - Manhattan-bound: 3-4 lanes: 2 on North Upper Roadway,
    - 1 or 2 on Lower Roadway.
  - Brooklyn-bound: 2 lanes on South Upper Roadway.
  - One or two Lower Roadway lanes closed.

#### Queensboro Bridge

Throughout 2004, **trucks** were permitted only on the two Lower Inner Roadways.

Throughout 2004, a High Occupancy Vehicle (HOV) facility was in effect on the Queensboro Bridge. The normally Queens-bound South Upper Roadway was reversed between 6:00am and 10:00am on weekdays to accommodate Manhattan-bound HOVs (no trucks) carrying two or more occupants.

From 10:00pm Friday, March 5 to 5:00am Monday, March 8, one of two lanes on the Queens-bound South Inner Roadway of the bridge was closed. Also, the inner roadways of Queens Plaza North and Queens Plaza South were closed, with traffic diverted to the service roadways.

From March 12 to March 22, the south inner roadway of Queens Plaza South was closed from 10:00pm Friday to 5:00am Monday. Eastbound traffic was directed to the south service roadway and/or the Queens Plaza North inner roadway. Westbound traffic was directed to the Queens Plaza North service roadway. Motorists were advised to avoid the plaza and use alternate East River crossings such as the Williamsburg Bridge, Queens-Midtown Tunnel, and Triborough Bridge.

From June 19 to August 20, the Queens-bound South Upper Roadway was closed intermittently Mondays through Wednesdays between 1:00am and 5:30am.

From June 19 to August 20, the Manhattan-bound North Upper Roadway was closed intermittently Thursdays and Fridays between 1:00am and 5:00am, and Saturdays between 1:00am and 6:00am.

#### Queensboro Bridge Operation: All of 2004.

North Inner Roadway:	W/B all times; W/B trucks required to use this roadway.
South Inner Roadway:	E/B all times; E/B trucks required to use this roadway.
North Upper Roadway:	W/B all times.
South Upper Roadway:	Closed for reversal 5:30-6:00am weekdays, W/B HOVs 6:00-10:00am weekdays, Closed for reversal 10:00-11:00am weekdays, E/B all other times.
North Outer Roadway:	Bicyclists and pedestrians all times.
South Outer Roadway:	E/B all times (passenger cars only).

Throughout 2004, there were intermittent closings of single lanes on individual roadways of the Queensboro Bridge during off-peak hours.

#### Williamsburg Bridge

Throughout 2004, **trucks** were permitted only on the outer roadways of the Williamsburg Bridge.

Prior to August 7, Manhattan-bound trucks were banned from the Williamsburg Bridge.

Either the North Outer Roadway or South Outer Roadway (one at a time) was closed according to the following schedule.

09/11-09/12: 4:00am Sat. - 8:00pm Sun. *Eastbound & westbound trucks banned from the bridge during this time.* 

The North Outer Roadway was closed according to the following schedule.

02/28-02/29:	4:00am Sat 8:00	pm Sun.
05/22:	4:00am - 8:00pm	Sat.
06/05:	4:00am - 8:00pm	Sat.

The South Outer Roadway was closed according to the following schedule.

04/17-04/25:	4:00am Sat 8:00pm Sun.
05/08:	4:00am - 8:00pm Sat.
08/21-08/22:	4:00am Sat 8:00pm Sun.
09/18-09/19:	4:00am Sat 8:00pm Sun.
Eastbound &	westbound trucks banned from the bridge during these times.

The foot walks were closed according to the following schedule.

05/15-08/17:	Round-the-clock	All days.	North foot walk closed.
08/18-12/31:	Round-the-clock	All days.	South foot walk closed.

Two Brooklyn-bound lanes were closed Saturday, June 26, between 6:00am-2:00pm.

#### Williamsburg Bridge Operation: January 1 – March 26, 2004.

Manhattan-bound trucks banned round-the-clock (through August 6, 2004). Four peak direction lanes available on weekdays.

North Outer Roadway closed as follows.

02/28-02/29: 4:00am Sat. - 8:00pm Sun.

Manhattan-bound:	3 lanes.	One lane closed in
Brooklyn-bound:	3 lanes.	each direction.
• Mon-Fri 5:00am - 3:00pm	l <b>.</b>	
Manhattan-bound:	4 lanes.	Two lanes closed in
Brooklyn-bound:	2 lanes.	the off-peak direction.
• Mon-Fri 3:00pm – Midnig	ght.	
Manhattan-bound:	4 lanes.	
Brooklyn-bound:	4 lanes.	
• Sat-Sun 1:00am - 8:00am.		
Manhattan-bound:	3 lanes.	One lane closed in
Brooklyn-bound:	3 lanes	each direction.

Manhattan-bound: 4 lanes. Brooklyn-bound: 4 lanes.

#### Williamsburg Bridge Operation: March 27 - December 31, 2004.

#### Manhattan-bound trucks banned round-the-clock through August 6.

Four peak direction lanes available on weekdays.

North Outer Roadway closed as follows.

05/22:	4:00am - 8:00pm	Sat.
06/05:	4:00am - 8:00pm	Sat.

South Outer Roadway closed as follows.

04/17-04/25: 4:00am Sat. - 8:00pm Sun. 4:00am - 8:00pm 0.5/08: Sat. 08/21-08/22: 4:00am Sat. - 8:00pm Sun. 09/18-09/19: 4:00am Sat. - 8:00pm Sun. *Eastbound & westbound trucks banned from the bridge during these times.* 

#### North Outer or South Outer Roadway (one at a time) closed as follows.

09/11-09/12: 4:00am Sat. - 8:00pm Sun. *Eastbound & westbound trucks banned from the bridge during this time.* 

One lane in each direction closed as follows.

09/25-09/26: 4:00am Sat. - 8:00pm Sun.

#### Foot walks closed as follows.

05/15-08/17: Round-the clock All days. North foot walk closed.

	08/18-12/31: Round	the clock	All days.	South foot walk closed.	
	Two Brooklyn-bound lane	s closed Satu	ırday, June 2	26, between 6:00am-2:00pm.	
٠	Mon-Fri Midnight - 5:00a				
	Manhattan-bound: Brooklyn-bound:			ane closed in direction.	
•	Mon-Fri 5:00am - 10:00ar	n.			
	Manhattan-bound:	4 lanes.	Two l	anes closed in	
	Brooklyn-bound:	2 lanes.	the of	f-peak direction.	
•	Mon-Fri 10:00am - 3:00pi				
	Manhattan-bound:	3 lanes.		tbound lane closed,	
	Brooklyn-bound:	2 lanes.	2 east	bound lanes closed.	
•	Mon-Fri 3:00pm – Midnig	ght.			
	Manhattan-bound:	4 lanes.			
	Brooklyn-bound:	4 lanes.			
• Sat-Sun 1:00am - 8:00am.					
	Manhattan-bound:	3 lanes.		ane closed in	
	Brooklyn-bound:	3 lanes.	each a	direction.	
•	• All other times.				
		4.1			

Manhattan-bound: 4 lanes. Brooklyn-bound: 4 lanes.

**Broadway Bridge** 

Throughout 2004, one of three lanes in each direction on the Broadway Bridge was closed round-the-clock.

## Macombs Dam Bridge

Throughout 2004, there were intermittent closures of one of two lanes in each direction on the Macombs Dam Bridge and the 155<sup>th</sup> Street viaduct as follows.

01/01-12/31: 10:00am - 3:00pm Mon-Fri. 10:00pm - 6:00am Mon-Fri. 12:01am - 8:00am Sat. 1:00am - 9:00am Sun. No closures within two hours of the start or end of Yankee home games.

Full closures of the Macombs Dam Bridge also occurred as required during the following times.

02/02-12/31: 12:01am - 5:00am Mon-Fri. 1:00am - 6:00am Sat-Sun. No closures within two hours of the start or end of Yankee home games.

### Madison Avenue Bridge

Eastbound lane closures were in effect as necessary on the Madison Avenue Bridge as follows:

01/01-03/12:	8:00am - 3:00pm	Mon-Fri.	1 E/B lane closed intermittently.
03/13-04/23:	7:00am - 3:00pm	All Days.	1 E/B lane closed intermittently.
04/24-12/31:			<ol> <li>E/B lane closed intermittently.</li> <li>E/B lane closed intermittently.</li> </ol>

No eastbound lane closures during Yankee home games.

Westbound lane closures were in effect as necessary on the Madison Avenue Bridge as follows:

01/01-03/12:	9:30am - 3:00pm	Mon-Fri.	1 W/B lane closed intermittently.
03/13-04/16:	10:00am - 4:00pm	Mon-Fri.	1 W/B lane closed intermittently.
04/17-04/23:	10:00am - 4:00pm 7:00am - 3:00pm		1 W/B lane closed intermittently. 1 W/B lane closed intermittently.
04/24-12/31:	10:00am - 4:00pm 11:00pm - 5:00am 7:00am - 3:00pm	Mon-Fri. Mon-Fri. Sat-Sun.	<ol> <li>W/B lane closed intermittently.</li> <li>W/B lane closed intermittently.</li> <li>W/B lane closed intermittently.</li> </ol>

No westbound lane closures during Yankee home games.

### Third Avenue Bridge (Harlem River)

Throughout 2004, two of the four Manhattan-bound lanes were closed for long term bridge rehabilitation.

On weekdays between 6:00-10:00am, Manhattan-bound passenger cars were accommodated in a reverse lane on the Willis Avenue Bridge.

An additional lane on the bridge was also closed as follows, leaving only one operational lane.

01/19:	11:00am - 2:00pm	Mon.	3 <sup>rd</sup> lane closed.
03/22-03/30:	12:01am - 5:00am	Mon-Fri.	3 <sup>rd</sup> lane closed intermittently.
04/17-12/31:	12:01am - 5:00am	All Days.	3 <sup>rd</sup> lane closed intermittently.

From January 1 to February 29 at 10:00am, the Third Avenue approach to the bridge was closed.

As of February 29 at 10:00am, the Bruckner Boulevard approach was closed.

The Third Avenue Bridge was completely closed as follows.

02/01:	1:00am - 6:00am	Sun.
02/29:	12:00am - 10:00am	Sun.
06/13:	12:00am - 8:00am Alternate date from 1	Sun. 1:00pm Mon. 06/14, until 5:00am Tues. 06/15.

06/28:	5:45pm - 6:15pm	Mon.	Closed for a maximum of 15 minutes.
10/29:	9:00am - 3:00pm	Fri.	Periodic closures of 15-30 minutes.
11/29-12/03:		Mon-l <i>Manha</i>	Fri. ttan-bound on the Willis Avenue Bridge.
12/15-12/17:	1:00am - 5:00am	Wed-l	Fri.
	One lane reversed to	<i>Manha</i>	<i>ttan-bound on the Willis Avenue Bridge</i> .
12/20-12/23:	1:00am - 5:00am	Mon-V	Wed.
	One lane reversed to	Manha	ttan-bound on the Willis Avenue Bridge.
12/27-12/30:	1:00am - 5:00am	Mon-7	Гhu.
	One lane reversed to	<i>Manha</i>	ttan-bound on the Willis Avenue Bridge.

#### Washington Bridge

Throughout 2004, intermittent lane closures were in effect as follows.

7:00am - 3:00pm	Mon-Fri	1 of 3 westbound lanes closed intermittently.
9:00am - 3:00pm	Mon-Fri	1 of 3 eastbound lanes closed intermittently.
6:00am - 2:00pm	Sat-Sun	1 of 3 lanes in each direction closed intermittently.

#### Willis Avenue Bridge

Throughout 2004, one lane was reversed to Manhattan-bound between 6:00-10:00am weekdays to accommodate traffic (passenger cars only) from the Third Avenue Bridge reconstruction. Direct access to the reversal lane was available from southbound Major Deegan Expressway (Exit 2), and from local streets via East 134<sup>th</sup> Street. Passenger cars using the reversal lane exited at First Avenue and 125<sup>th</sup> Street in Manhattan, and could turn left for access to southbound FDR Drive, or right for access to local streets. During these hours, there were two Bronx-bound lanes open (one lane from the First Avenue approach and one lane from the FDR Drive approach).

The reversal of one lane to Manhattan-bound was also in effect during full closures of the Third Avenue Bridge as follows;

11/29-12/03:	1:00am - 5:00am	Mon-Fri.
12/15-12/17:	1:00am - 5:00am	Wed-Fri.
12/20-12/23:	1:00am - 5:00am	Mon-Wed.
12/27-12/30:	1:00am - 5:00am	Mon-Thu.

There were intermittent closures of one of two lanes from the First Avenue and FDR Drive approaches as follows.

01/01-04/16:	12:01am - 5:00am	Mon-Fri.
05/15-06/11:	11:00pm - 5:00am 12:01am - 6:00am	Mon-Fri, Sat.
06/12-06/18:	12:01am - 5:00am 1:00am - 6:00am	Mon-Fri, Sat-Sun.

06/26-07/22:	12:01am - 5:00am	Mon-Fri,
	1:00am - 6:00am	Sat-Sun.

One of two lanes on the northbound FDR Drive exit to the Willis Avenue Bridge was closed as follows

04/26-04/29: 11:30pm - 5:00am Mon-Thu.

The First Avenue approach was closed as follows.

06/19-06/25:	12:01am - 5:00am 1:00am - 6:00am	Mon-Fri, Sat-Sun.	<i>I<sup>st</sup> Ave. approach closed intermittently.</i>
07/23-09/23:	12:01am - 5:00am 1:00am - 6:00am	Mon-Fri, Sat.	1 <sup>st</sup> Ave. approach closed.
11/13:	12:01am - 11:59pm	Sat.	1 <sup>st</sup> Ave. approach closed.

The FDR Drive approach was closed as follows.

09/24-11/12: 12:01am - 5:00am Mon, Wed, Fri, Sat. FDR approach closed.

One of two lanes on the northbound FDR Drive exit to the Willis Avenue Bridge was closed April 26-29 (Monday-Thursday) from 11:30pm to 5:00am.

## 145<sup>th</sup> Street Bridge

There were intermittent closures of one of two eastbound lanes as follows.

01/01-03/12:	9:30am - 3:00pm	Mon-Fri.
03/13-08/06:	10:00am - 2:00pm No eastbound lane	Mon-Fri. closures during Yankee home games.
08/07-11/12:	9:00am - 3:00pm <i>No lane closures du</i>	Mon-Fri. ring Yankee home games.
11/13-12/31:	7:00am - 3:00pm	Mon-Fri.

There were intermittent closures of one of two westbound lanes as follows.

01/01-03/12:	9:30am - 3:00pm	Mon-Fri.
03/13-03/26:	10:00am - 2:00pm	Mon-Fri.
08/07-11/12:	9:00am - 3:00pm No lane closures di	Mon-Fri. uring Yankee home games.
11/13-12/31:	9:00am - 5:30pm	Mon-Fri.

### **Brooklyn-Battery Tunnel**

Throughout 2004, the inbound **exit to Trinity Place** was closed weekdays between 6:00-10:00am, and between 3:00-7:00pm.

One of the two tubes was completely closed according to the following schedule.

01/01-03/26:	9:00pm - 5:00am One tube closed. Two-way traffic main	Sunday nights to Friday mornings.
03/27-08/20:	9:00pm - 5:00am One tube closed inter Two-way traffic main	
08/21-12/10:	9:00pm - 5:00am 12:01am - 8:00am One tube closed inter Two-way traffic main	Sunday nights to Friday mornings, Saturdays. <i>Emittently</i> . <i>Itained in the other tube during these closures</i> .
12/11-12/31:	One tube closed inter	Sunday nights to Friday mornings, Friday nights to Saturday mornings. mittently. tained in the other tube during these closures.

#### Henry Hudson Bridge

**Northbound** (upper level) lane closures were in effect during 2004 according to the following schedule.

All 2004: Round-the-clock All days 1 of 3 northbound lanes closed.

**Southbound** (lower level) lane closures were in effect during 2004 according to the following schedule.

All 2004: Round-the-clock All days 1 of 4 southbound lanes closed.

#### Queens-Midtown Tunnel

One lane was closed intermittently according to the following schedule.

09/11-12/12: 11:00pm - 6:00am weeknights.

One of the two tubes was completely closed according to the following schedule.

10/09-10/10: 6:00am Sat. - 6:00pm Sunday. One tube closed, two-way traffic maintained in the other tube.

## Triborough Bridge

Lane closures were in effect on the Triborough Bridge according to the following schedule.

01/01-09/17:	Round-the-clock. All days 1 lane closed. 4 lanes maintained during peak hours, 3 lanes off-peak.
01/01-09/17:	7:00am Monday - 2:30pm Friday One lane closed on the Harlem River lift span leaving Manhattan for Queens/Bronx.
01/01-09/17:	10:00am - 2:30pm Mon-Fri 1 Manhattan-bound lane closed.

09/18-12/31:	9:30am - 3:00pm Mon-Fri One lane closed on the Harlem River lift span Manhattan-bound.
09/18-12/31:	Round-the-clock. All Days One lane closed on the Harlem River lift span Bronx-and-Queens- bound.
09/30-10/02:	9:30pm Thursday - 5:30am Friday & 1:00am - 7:00am Saturday. Traffic to and from Manhattan reduced to one lane in each direction.

On Tuesday, May 11, 2004, from 12:01am to 5:00am, the Triborough Bridge was closed to and from Queens for installation of a truss pin. Travel between The Bronx, Manhattan, and Randall's Island was not affected.

### George Washington Bridge

Throughout 2004, **trucks** were required to use the upper level.

Three of four lanes in each direction on the upper level were closed from 10:00pm Friday, July 16 to 10:00am Saturday, July 17, and from 10:00pm Saturday, July 17 to 10:00am Sunday, July 18. During these times, full roadway closures also occurred intermittently.

Throughout 2004, there were also intermittent closures of single lanes on the various George Washington Bridge roadways and ramps during off-peak hours.

#### Holland Tunnel

From January 1 to August 1, two-axle and three-axle single unit trucks were permitted eastbound to Manhattan. Tractor trailers, and single unit trucks with more than three axles, were not permitted.

As of August 2, all eastbound (to Manhattan) commercial traffic was banned from the tunnel.

Throughout 2004, the tunnel was open westbound to New Jersey for two-axle and threeaxle single unit trucks. Tractor trailers, and single unit trucks with more than three axles, were not permitted.

Eastbound (to Manhattan) lane closures were in effect in the Holland Tunnel as follows.

01/01-10/22:	10:00pm - 5:00am Mon-Fri,	1 e/b lane closed.
	11:59pm Fri - 7:00am Sat.	1 e/b lane closed.

Westbound (to New Jersey) lane closures were in effect in the Holland Tunnel as follows.

01/01-04/09:	11:00pm - 5:00am	Sun-Fri.	1 w/b lane closed intermittently.
10/23-12/31:	10:30pm - 5:30am 1:00am - 7:00am		1 w/b lane closed. 1 w/b lane closed.

## Lincoln Tunnel

One of the three tubes of the Lincoln Tunnel was closed as follows.

01/01-09/17:	11:00pm - 5:00am 1:00am - 9:00am	Two tubes open, providing two traffic lanes in each direction.
09/18-12/31:	11:00pm - 5:00am 12:30am - 8:30am	<i>Two tubes open, providing two traffic lanes in each direction.</i>







## Manhattan Crossings 2004 Average Daily Traffic Volumes To and From Manhattan

Manhattan Bridge       38,653       40,476       79,         Queensboro Bridge       87,939       92,430       180,         Williamsburg Bridge       55,642       54,886       110,         Total East River       254,050       253,539       507,         HARLEM RIVER BRIDGES       40,476       79,       90,430       180,000         HARLEM RIVER BRIDGES       253,539       507,000       253,539       507,000         HARLEM RIVER BRIDGES       40,476       70,000       70,000       70,000         HARLEM RIVER BRIDGES       40,476       70,000       70,000       70,000       70,000       70,000         HARLEM RIVER BRIDGES       40,476       70,000       70,000       70,000       70,000       70,000       70,000       70,000         HARLEM RIVER BRIDGES       40,476       40,47	563
Queensboro Bridge         87,939         92,430         180, Williamsburg Bridge           Williamsburg Bridge         55,642         54,886         110, State           Total East River         254,050         253,539         507, State           HARLEM RIVER BRIDGES         40, State         40, State         40, State         40, State           Alexander Hamilton Bridge         89,427         85,896         175, Broadway Bridge         18,493         16,697         35, Macombs Dam Bridge         22,299         18,259         40, Madison Avenue Bridge         25,174         23,549         48, Third Avenue Bridge         47,053          47, University Heights Bridge         26,045         21,305         47, Washington Bridge         25,363         32,167         57, Willis Avenue Bridge         2,834         71,866         74, 145th Street Bridge         12,702         13,292         25,	
Williamsburg Bridge       55,642       54,886       110,         Total East River       254,050       253,539       507,         HARLEM RIVER BRIDGES       Image: State of the state of	129
Total East River         254,050         253,539         507,507           HARLEM RIVER BRIDGES         Alexander Hamilton Bridge         89,427         85,896         175,57           Broadway Bridge         18,493         16,697         35,57           Macombs Dam Bridge         22,299         18,259         40,57           Madison Avenue Bridge         25,174         23,549         48,57           Third Avenue Bridge         47,053          47,57           University Heights Bridge         26,045         21,305         47,57           Washington Bridge         25,363         32,167         57,57           Willis Avenue Bridge         2,834         71,866         74,145th Street Bridge         12,702         13,292         25,57	369
HARLEM RIVER BRIDGES         Alexander Hamilton Bridge       89,427       85,896       175,         Broadway Bridge       18,493       16,697       35,         Macombs Dam Bridge       22,299       18,259       40,         Madison Avenue Bridge       25,174       23,549       48,         Third Avenue Bridge       47,053        47,         University Heights Bridge       26,045       21,305       47,         Washington Bridge       25,363       32,167       57,         Willis Avenue Bridge       2,834       71,866       74,         145th Street Bridge       12,702       13,292       25,	528
Alexander Hamilton Bridge89,42785,896175Broadway Bridge18,49316,69735Macombs Dam Bridge22,29918,25940Madison Avenue Bridge25,17423,54948Third Avenue Bridge47,05347University Heights Bridge26,04521,30547Washington Bridge25,36332,16757Willis Avenue Bridge2,83471,86674145th Street Bridge12,70213,29225	589
Broadway Bridge       18,493       16,697       35,         Macombs Dam Bridge       22,299       18,259       40,         Madison Avenue Bridge       25,174       23,549       48,         Third Avenue Bridge       47,053        47,         University Heights Bridge       26,045       21,305       47,         Washington Bridge       25,363       32,167       57,         Willis Avenue Bridge       2,834       71,866       74,         145th Street Bridge       12,702       13,292       25,	
Macombs Dam Bridge       22,299       18,259       40,         Madison Avenue Bridge       25,174       23,549       48,         Third Avenue Bridge       47,053        47,         University Heights Bridge       26,045       21,305       47,         Washington Bridge       25,363       32,167       57,         Willis Avenue Bridge       2,834       71,866       74,         145th Street Bridge       12,702       13,292       25,	323
Madison Avenue Bridge       25,174       23,549       48         Third Avenue Bridge       47,053        47         University Heights Bridge       26,045       21,305       47         Washington Bridge       25,363       32,167       57         Willis Avenue Bridge       2,834       71,866       74         145th Street Bridge       12,702       13,292       25	190
Third Avenue Bridge       47,053        47         University Heights Bridge       26,045       21,305       47         Washington Bridge       25,363       32,167       57         Willis Avenue Bridge       2,834       71,866       74         145th Street Bridge       12,702       13,292       25	558
University Heights Bridge         26,045         21,305         47           Washington Bridge         25,363         32,167         57           Willis Avenue Bridge         2,834         71,866         74           145th Street Bridge         12,702         13,292         25	723
Washington Bridge         25,363         32,167         57           Willis Avenue Bridge         2,834         71,866         74           145th Street Bridge         12,702         13,292         25	053
Willis Avenue Bridge         2,834         71,866         74           145th Street Bridge         12,702         13,292         25	350
145th Street Bridge 12,702 13,292 25,	530
-	700
Total Harlem River         269,390         283,031         552,	994
	421
MTABT FACILITIES	
Brooklyn-Battery Tunnel 30,088 24,400 54	488
Henry Hudson Bridge         39,333         33,781         73,	114
Queens-Midtown Tunnel         46,267         40,332         86,	599
Triborough Bridge         54,453         43,505         97,	958
Total MTABT         170,141         142,018         312,	159
PANYNJ FACILITIES	
George Washington Bridge 152,418 162,648 315	
	171
Lincoln Tunnel 62,826 62,333 125	159
Total PANYNJ         262,050         274,346         536	396
GRAND TOTAL 955,631 952,934 1,908	565

## **Manhattan Crossings Vehicle Volumes**



A.M. Peak Hour Volumes – Inbound P.M. Peak Hour Volumes – Outbound 7-8 am 5-6 pm PANYNJ East River East River PANYNJ 18,640 - 27.7 % 17,007 - 25.2 % 16,456 - 24.8 % 19,429 - 29.2 % Harlem River MTABT MTABT Harlem River 16,853 - 25.0 % 14,876 - 22.1 % 11,786 - 17.8 % 18,706 - 28.2 %

## Total Manhattan Crossings 2004 Average Hourly Traffic Volumes To and From Manhattan (All Facilities)

	Entering Manhattan	Leaving Manhattan	2-Way Total
12-1am	16,885	28,784	45,669
1-2am	11,146	18,244	29,390
2-3am	8,315	12,183	20,498
3-4am	8,532	10,344	18,876
4-5am	13,035	11,915	24,950
5-6am	30,733	18,517	49,250
6-7am	59,424	32,828	92,252
7-8am	67,376 **	42,621	109,997
8-9am	65,863	44,295	110,158
9-10am	58,867	39,103	97,970
10-11am	49,359	38,050	87,409
11-12am	45,236	38,176	83,412
12-1pm	44,287	40,896	85,183
1-2pm	44,793	44,212	89,005
2-3pm	48,038	51,346	99,384
3-4pm	51,180	59,651	110,831
4-5pm	52,250	65,423	117,673
5-6pm	54,130	66,377 **	120,507
6-7pm	51,956	62,232	114,188
7-8pm	45,850	57,340	103,190
8-9pm	37,748	51,421	89,169
9-10pm	34,019	45,031	79,050
10-11pm	31,381	39,888	71,269
11-12pm	25,228	34,057	59,285
24 hrs	955,631	952,934	1,908,565
7-10am	192,106	126,019	318,125
10am-1pm	138,882	117,122	256,004
1-4pm	144,011	155,209	299,220
4-7pm	158,336	194,032	352,368
7am-7pm	633,335	592,382	1,225,717

\*\* Peak Volumes

## 2004 East & Harlem River Bridges 7am-7pm Two-Way Vehicle Classification

			Commuter		Commercia	I
EAST RIVER BRIDGES	Autos	Buses	Vans	Trucks	Vans	Total
Brooklyn	75,630	260	2,900	52	3,220	82,062
Manhattan	22,947	1,179	4,779	11,653	8,107	48,665
Queensboro	82,118	2,286	5,759	5,784	10,098	106,045
Williamsburg	42,714	1,217	10,224	6,585	5,235	65,975
Total East River	223,409	4,942	23,662	24,074	26,660	302,747
HARLEM RIVER BRIDGE	S					
Alexander Hamilton	84,969	271	2,208	14,677	3,210	105,335
Broadway	22,451	707	358	698	876	25,090
Macombs Dam	23,323	353	286	1,155	2,042	27,159
Madison Avenue	25,535	1,388	1,262	1,503	1,909	31,597
Third Avenue	22,518	578	1,809	2,106	1,977	28,988
University Heights	26,949	356	985	1,063	1,629	30,982
Washington	34,289	1,008	915	1,128	1,570	38,910
Willis Avenue	38,917	748	1,260	2,687	3,227	46,839
145th Street	15,493	452	623	837	731	18,136
Total Harlem River	294,444	5,861	9,706	25,854	17,171	353,036

## 2004 MTABT & PANYNJ Facilities 24 Hour Two-Way Vehicle Classification

MTABT FACILITIES	Autos*	Buses	Trucks	Total
Brooklyn-Battery Tunnel	49,526	2,477	2,485	54,488
Henry Hudson Bridge	72,685	0	429	73,114
Queens-Midtown Tunnel	79,060	1,198	6,341	86,599
Triborough Bridge	93,725	979	3,254	97,958
Total MTABT	294,996	4,654	12,509	312,159
PANYNJ FACILITIES				
George Washington Bridge	280,192	3,611	31,263	315,066
Holland Tunnel **	92,809	1,385	1,977	96,171
Lincoln Tunnel	102,018	13,055	10,086	125,159
Total PANYNJ	475,019	18,051	43,326	536,396

\* Light trucks & vans included with autos.

\*\* Holland Tunnel truck volume estimated. Only 2-axle and 3-axle single unit trucks allowed westbound. No trucks allowed eastbound.

## 7am – 7pm Two-Way Classification





#### **ORIGINS AND DESTINATIONS OF MANHATTAN AUTO COMMUTERS**

ORIGINS	Manhattan CBD	Upper Manhattan	Total
Bronx	6.5%	16.5%	9.0%
Brooklyn	13.2%	8.7%	12.1%
Manhattan	9.9%	14.8%	11.1%
Queens	19.4%	17.7%	19.0%
Staten Island	5.5%	2.0%	4.7%
Subtotal NYC Origins	54.5%	59.7%	55.9%
Long Island	10.7%	7.1%	9.8%
Upstate NY	10.0%	15.0%	11.2%
New Jersey	20.8%	15.4%	19.5%
Connecticut	1.6%	1.0%	1.4%
Pennsylvania	1.2%	0.8%	1.1%
Other Origins	1.2%	1.0%	1.1%
Subtotal Suburbs	45.5%	40.3%	44.1%
GRAND TOTAL	100.0%	100.0%	100.0%

#### DESTINATIONS

Definitions: CBD - Manhattan Central Business District (area south of and including 60th Street).

Upper Manhattan - Area of Manhattan north of 60th Street.

Data Source: New York City Department of City Planning Website, 2000 U.S. Census Journey to Work Tables.



#### DESTINATIONS OF HUDSON RIVER CROSSINGS EASTBOUND AUTO TRAFFIC

Eastbound Auto Destinations	6-7 am	7-10 am	4-7 pm	5 am - 11 pm
Manhattan				
Midtown	19.9%	23.6%	11.0%	17.5%
Valley	13.1%	13.4%	11.5%	13.4%
Downtown	12.0%	9.9%	5.8%	8.4%
CBD Total	45.0%	46.9%	28.2%	39.3%
Upper Manhattan	18.7%	19.5%	19.7%	19.9%
Manhattan Total	63.6%	66.4%	47.9%	59.2%
Bronx	9.7%	11.1%	11.3%	10.1%
Brooklyn	7.6%	4.7%	7.9%	6.3%
Queens	10.9%	8.1%	14.3%	11.3%
Westchester	3.0%	3.8%	6.4%	4.4%
Long Island	3.5%	4.2%	8.0%	5.7%
Other	1.6%	1.8%	4.2%	3.0%
Thru Trip Total	36.4%	33.6%	52.1%	40.8%
GRAND TOTAL	100.0%	100.0%	100.0%	100.0%

#### TOTAL OF HOLLAND TUNNEL, LINCOLN TUNNEL AND GEORGE WASHINGTON BRIDGE

1989

Source: PANYNJ, Vehicular Origin and Destination Survey - 1989, May 1990.

## DESTINATIONS OF HOLLAND TUNNEL EASTBOUND AUTO TRAFFIC

Eastbound Auto				
Destinations	6-7 am	7-10 am	4-7 pm	5 am - 11 pm
Manhattan				
Midtown	6.8%	10.6%	6.6%	8.9%
Valley	15.3%	19.8%	23.4%	22.7%
Downtown	40.9%	38.8%	22.1%	29.9%
CBD Total	63.0%	69.1%	52.1%	61.5%
Upper Manhattan	5.1%	5.2%	7.9%	7.0%
Manhattan Total	68.1%	74.3%	60.0%	68.5%
Bronx	1.4%	0.9%	1.1%	0.9%
Brooklyn	17.6%	16.2%	22.8%	18.0%
Queens	9.7%	6.5%	12.1%	9.4%
Westchester	0.3%	0.6%	0.1%	0.2%
Long Island	2.0%	1.4%	2.7%	2.4%
Other	0.9%	0.1%	1.2%	0.6%
Thru Trip Total	31.9%	25.7%	40.0%	31.5%
GRAND TOTAL	100.0%	100.0%	100.0%	100.0%

1989

Source: PANYNJ, <u>Vehicular Origin and Destination Survey - 1989</u>, May 1990.

## DESTINATIONS OF LINCOLN TUNNEL EASTBOUND AUTO TRAFFIC

1989

Eastbound Auto				
Destinations	6-7 am	7-10 am	4-7 pm	5 am - 11 pm
Manhattan				
Midtown	37.8%	45.8%	30.8%	38.9%
Valley	23.0%	25.5%	22.6%	23.8%
Downtown	8.9%	7.3%	4.2%	6.7%
CBD Total	69.8%	78.6%	57.6%	69.4%
Upper Manhattan	11.7%	11.3%	22.0%	16.5%
Manhattan Total	81.5%	89.9%	79.6%	85.9%
Bronx	0.8%	1.0%	1.0%	0.8%
Brooklyn	5.8%	3.0%	5.9%	4.2%
Queens	9.6%	4.1%	10.7%	7.0%
Westchester	0.2%	0.5%	0.5%	0.3%
Long Island	1.3%	1.4%	1.9%	1.4%
Other	0.8%	0.2%	0.4%	0.4%
Thru Trip Total	18.5%	10.1%	20.4%	14.1%
GRAND TOTAL	100.0%	100.0%	100.0%	100.0%

Source: PANYNJ, Vehicular Origin and Destination Survey - 1989, May 1990.

# DESTINATIONS OF GEORGE WASHINGTON BRIDGE EASTBOUND AUTO TRAFFIC

Eastbound Auto						
Destinations	6-7 am	7-10 am	4-7 pm	5 am - 11 pm		
Manhattan						
Midtown	15.6%	17.9%	7.3%	11.8%		
Valley	8.5%	7.1%	5.6%	6.9%		
Downtown	6.1%	4.2%	1.8%	3.0%		
CBD Total	30.2%	29.2%	14.7%	21.7%		
Upper Manhattan	24.9%	26.1%	22.2%	24.7%		
Manhattan Total	55.1%	55.3%	36.9%	46.4%		
Bronx	15.4%	17.4%	16.6%	16.2%		
Brooklyn	5.9%	2.6%	4.5%	3.8%		
Queens	11.8%	10.0%	15.8%	13.5%		
Westchester	4.9%	5.9%	9.4%	7.2%		
Long Island	4.7%	6.0%	10.9%	8.2%		
Other	2.2%	2.8%	5.9%	4.7%		
Thru Trip Total	44.9%	44.7%	63.1%	53.6%		
GRAND TOTAL	100.0%	100.0%	100.0%	100.0%		

Source: PANYNJ, <u>Vehicular Origin and Destination Survey - 1989</u>, May 1990.

1989


# DESTINATIONS OF HUDSON RIVER WEEKDAY EASTBOUND TRUCK TRAFFIC

Destinations	Holland Tunnel	Lincoln Tunnel	G. Washington Bridge
Manhattan	38.91%	78.35%	4.46%
NY City outer boroughs			
Bronx	0.98%	0.29%	16.13%
Brooklyn	34.44%	9.20%	2.68%
Queens	16.67%	6.85%	10.96%
Staten Island	0.08%	0.00%	0.10%
Subtotal outer boroughs	52.18%	16.34%	29.87%
NY City Total	91.07%	94.69%	34.33%
Destinations outside NY City			
Long Island	8.32%	4.73%	17.26%
Westchester	0.21%	0.00%	7.62%
New England	0.23%	0.21%	37.87%
Other	0.16%	0.39%	2.92%
Subtotal outside NY City	8.93%	5.34%	65.67%
Thru Trips Total (non-Manhattan destinations)	61.09%	21.65%	95.54%
GRAND TOTAL	100.00%	100.00%	100.00%

## (December 1991)

Source: PANYNJ, <u>1991 Truck Origin-Destination Commodity Survey</u>, March 1992.

# VEHICLE OCCUPANCY -- INBOUND TO MANHATTAN

# Average Number of Persons per Auto

	Peak Hour Persons Auto	7-10am Percent Autos with Driver Only
Brooklyn-Battery Tunnel	1.31	72.8 %
Brooklyn Bridge	1.22	80.6 %
Manhattan Bridge	1.25	79.9 %
Williamsburg Bridge	1.17	84.6 %
Holland Tunnel	1.63	68.3 %
5 Lower Manhattan Crossings	1.32	76.8 %
Queens-Midtown Tunnel	1.24	77.7 %
Queensboro Bridge	1.44	66.4 %
Lincoln Tunnel	1.51	73.1 %
3 Midtown Manhattan Crossings	1.41	72.0 %
Triborough Bridge	1.18	83.2 %
Alexander Hamilton Bridge	1.16	86.0 %
Broadway Bridge	1.19	84.8 %
Macombs Dam Bridge	1.32	72.3 %
Madison Avenue Bridge	1.28	77.1 %
Third Avenue Bridge	1.22	80.7 %
University Heights Bridge	1.23	82.9 %
Washington Bridge	1.38	72.9 %
145th Street Bridge	1.32	73.7 %
Henry Hudson Bridge	1.20	88.8 %
George Washington Bridge	1.68	77.0 %
11 Upper Manhattan Crossings	1.37	80.8 %
All 19 Inbound Manhattan Crossings	1.37	77.9 %

# Manhattan Crossings 2003-2004 Traffic Volume Trends Both Directions

EAST RIVER BRIDGES	Highway Functional Classification	2003	2004	Percent Change
Brooklyn	Principal Arterial	134,444	137,563	2.3 %
Manhattan	Principal Arterial	73,767	79,129	7.3 %
Queensboro	Principal Arterial	184,964	180,369	- 2.5 %
Williamsburg	Principal Arterial	100,243	110,528	10.3 %
Total East River		493,418	507,589	2.9 %
HARLEM RIVER BRIDGES				
Alexander Hamilton	Interstate	182,704	175,323	- 4.0 %
Broadway	Principal Arterial	36,888	35,190	- 4.6 %
Macombs Dam	Principal Arterial	42,254	40,558	- 4.0 %
Madison Avenue	Principal Arterial	41,575	48,723	17.2 %
Third Avenue	Principal Arterial	43,065	47,053	9.3 %
University Heights	Principal Arterial	50,126	47,350	- 5.5 %
Washington	Minor Arterial	63,154	57,530	- 8.9 %
Willis Avenue	Principal Arterial	66,710	74,700	12.0 %
145th Street	Minor Arterial	23,034	25,994	12.9 %
Total Harlem River		549,510	552,421	0.5 %
MTABT Manhattan Facilities				
	lateratete	FC 074	E4 400	2.2.0/
Brooklyn-Battery Tunnel Henry Hudson Bridge	Interstate	56,271	54,488	- 3.2 % 1.3 %
Queens-Midtown Tunnel	Principal Arterial	72,209 85,377	73,114 86,599	1.3 %
Triborough Bridge Manhattan Plaza	Interstate Principal Arterial	93,177	97,958	5.1 %
	Filicipal Alterial			
Total MTABT Manhattan		307,034	312,159	1.7 %
PANYNJ Manhattan Facilities				
George Washington Bridge	Interstate	319,029	315,066	- 1.2 %
Holland Tunnel	Interstate	101,097	96,171	- 4.9 %
Lincoln Tunnel	Principal Arterial	127,323	125,159	- 1.7 %
Total Manhattan - New Jersey		547,449	536,396	- 2.0 %

	GRAND TOTALS	1,897,411	1,908,565	0.6 %
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# Manhattan Crossings Hourly Vehicular Volumes 2003 vs 2004

	Inbound			Outbound		
	2003	2004	Percent Change	2003	2004	Percent Change
Mid-1	15,924	16,885	6.0 %	27,039	28,784	6.5 %
1-2 am	10,271	11,146	8.5 %	16,510	18,244	10.5 %
2-3 am	8,308	8,315	0.1 %	11,576	12,183	5.2 %
3-4 am	8,591	8,532	-0.7 %	9,828	10,344	5.3 %
4-5 am	13,327	13,035	-2.2 %	11,845	11,915	0.6 %
5-6 am	32,024	30,733	-4.0 %	19,834	18,517	-6.6 %
6-7 am	58,858	59,424	1.0 %	34,776	32,828	-5.6 %
7-8 am	67,533	67,376	-0.2 %	44,001	42,621	-3.1 %
8-9 am	64,848	65,863	1.6 %	45,176	44,295	-2.0 %
9-10 am	56,928	58,867	3.4 %	41,623	39,103	-6.1 %
10-11 a	48,866	49,359	1.0 %	39,219	38,050	-3.0 %
11-Noon	44,977	45,236	0.6 %	40,414	38,176	-5.5 %
Noon-1	43,270	44,287	2.4 %	41,273	40,896	-0.9 %
1-2 pm	44,354	44,793	1.0 %	44,523	44,212	-0.7 %
2-3 pm	47,821	48,038	0.5 %	50,748	51,346	1.2 %
3-4 pm	51,301	51,180	-0.2 %	58,268	59,651	2.4 %
4-5 pm	52,579	52,250	-0.6 %	63,259	65,423	3.4 %
5-6 pm	54,021	54,130	0.2 %	62,643	66,377	6.0 %
6-7 pm	51,073	51,956	1.7 %	60,018	62,232	3.7 %
7-8 pm	45,692	45,850	0.3 %	55,726	57,340	2.9 %
8-9 pm	37,879	37,748	-0.3 %	50,541	51,421	1.7 %
9-10 pm	34,298	34,019	-0.8 %	44,482	45,031	1.2 %
10-11 p	30,733	31,381	2.1 %	40,391	39,888	-1.2 %
11-Mid	24,737	25,228	2.0 %	35,485	34,057	-4.0 %
Totals	948,213	955,631	0.8 %	949,198	952,934	0.4 %
7-10am	189,309	192,106	1.5 %	130,800	126,019	-3.7 %
10am-1pm	137,113	138,882	1.3 %	120,906	117,122	-3.1 %
1-4pm	143,476	144,011	0.4 %	153,539	155,209	1.1 %
4-7pm	157,673	158,336	0.4 %	185,920	194,032	4.4 %
7am-7pm	627,571	633,335	0.9 %	591,165	592,382	0.2 %

# Manhattan Crossings Hourly Vehicular Volumes 1994 vs 2004

	Inbound			Outbound		
	1994	2004	Percent Change	1994	2004	Percent Change
Mid-1	13,135	16,885	28.5 %	24,468	28,784	17.6 %
1-2 am	8,033	11,146	38.8 %	13,852	18,244	31.7 %
2-3 am	6,226	8,315	33.6 %	9,496	12,183	28.3 %
3-4 am	6,281	8,532	35.8 %	7,158	10,344	44.5 %
4-5 am	10,064	13,035	29.5 %	8,174	11,915	45.8 %
5-6 am	24,184	30,733	27.1 %	14,021	18,517	32.1 %
6-7 am	56,149	59,424	5.8 %	27,572	32,828	19.1 %
7-8 am	68,752	67,376	-2.0 %	38,573	42,621	10.5 %
8-9 am	66,574	65,863	-1.1 %	40,042	44,295	10.6 %
9-10 am	56,159	58,867	4.8 %	34,679	39,103	12.8 %
10-11 a	45,844	49,359	7.7 %	33,767	38,050	12.7 %
11-Noon	41,401	45,236	9.3 %	34,929	38,176	9.3 %
Noon-1	39,862	44,287	11.1 %	34,767	40,896	17.6 %
1-2 pm	40,685	44,793	10.1 %	39,102	44,212	13.1 %
2-3 pm	44,300	48,038	8.4 %	45,774	51,346	12.2 %
3-4 pm	47,893	51,180	6.9 %	55,516	59,651	7.4 %
4-5 pm	49,189	52,250	6.2 %	60,578	65,423	8.0 %
5-6 pm	49,680	54,130	9.0 %	59,642	66,377	11.3 %
6-7 pm	45,411	51,956	14.4 %	57,413	62,232	8.4 %
7-8 pm	38,813	45,850	18.1 %	51,549	57,340	11.2 %
8-9 pm	31,816	37,748	18.6 %	45,166	51,421	13.8 %
9-10 pm	29,208	34,019	16.5 %	38,450	45,031	17.1 %
10-11 p	26,776	31,381	17.2 %	35,711	39,888	11.7 %
11-Mid	22,273	25,228	13.3 %	32,350	34,057	5.3 %
Totals	868,708	955,631	10.0 %	842,749	952,934	13.1 %
7-10am	191,485	192,106	0.3 %	113,294	126,019	11.2 %
10am-1pm	127,107	138,882	9.3 %	103,463	117,122	13.2 %
1-4pm	132,878	144,011	8.4 %	140,392	155,209	10.6 %
4-7pm	144,280	158,336	9.7 %	177,633	194,032	9.2 %
7am-7pm	595,750	633,335	6.3 %	534,782	592,382	10.8 %

# Percent Difference by Period of Day Manhattan Crossings 1994 - 2004

Time Period	To Manhattan	From Manhattan
1am - 4am	36.3 %	33.6 %
4am - 7am	14.2 %	27.1 %
7am - 10am	0.3 %	11.2 %
10am - 1pm	9.3 %	13.2 %
1pm - 4pm	8.4 %	10.6 %
4pm - 7pm	9.7 %	9.2 %
7pm - 10pm	17.8 %	13.8 %
10pm - 1am	18.2 %	11.0 %
24 Hour Total	10.0 %	13.1 %

# Average Annual Growth Rate by Period of Day Manhattan Crossings 1994 - 2004

Time Period	To Manhattan	From Manhattan
1am - 4am	2.8 %	2.9 %
4am - 7am	1.4 %	2.5 %
7am - 10am	- 0.5 %	0.7 %
10am - 1pm	0.6 %	1.0 %
1pm - 4pm	0.7 %	0.8 %
4pm - 7pm	0.7 %	0.4 %
7pm - 10pm	1.3 %	0.7 %
10pm - 1am	1.0 %	1.0 %
24 Hour Total	0.6 %	0.9 %

#### Thousands 2,500 2,000 1,500 1,000 500 2002 1994 1995 1996 1997 1998 1999 2000 2001 2003 2004 Staten Is. 216,624 218,095 220,987 226,808 232,790 240,258 247,848 252,657 252,542 252,422 254,108 727,167 727,175 721,961 742,288 754,729 773,921 784,848 774,887 749,146 723,400 719,289 Queens Brooklyn 476,612 469,105 448,116 455,177 463,637 479,118 486,987 470,290 439,716 410,742 401,795 260,974 254,944 245,225 252,189 260,742 268,910 269,577 255,087 240,592 232,990 Bronx 248,191 226,287 226,480 226,028 234,175 239,308 247,395 255,780 257,531 249,716 241,995 240,388 Manhattan NYC Total 1,907,664 1,895,799 1,862,317 1,906,639 1,942,653 2,001,434 2,044,373 2,024,942 1,946,207 1,869,151 1,848,570

New York City Motor Vehicle Registrations 1994-2004

NYC Annual Growth Rate = 0.1%

Manhattan Annual Growth Rate = 1.2%

# Total Manhattan Crossings Average Daily Traffic Volumes 1948 - 2004

Year	East River Bridges	Harlem River Bridges	M.T.A.B.T. Facilities	P.A.N.Y.N.J. Facilities	Totals
1948	254,068	207,177	92,977 110,071	115,785	670,007 694,457
1949 1950	260,933	193,510 222,671		129,943	771,407
	240,227		161,856	146,653	
1951	269,352	249,199	180,272	166,150	864,973
1952	261,704	222,196	194,327	181,253	859,480
1953 1954	292,726	248,629	200,535	194,577	936,467
1954	297,903 293,633	236,056 250,239	204,616 216,835	202,394 211,926	940,969 972,633
1955	293,033	266,781	231,535	213,088	1,009,270
1950	297,028	316,530	236,343	218,623	1,068,524
1958	304,470	329,747	232,413	221,494	1,088,124
1959	312,431	342,349	231,501	237,021	1,123,302
1960	322,660	345,199	230,768	239,620	1,138,247
1961	316,813	333,463	227,241	236,833	1,114,350
1962	318,170	313,230	233,010	250,646	1,115,056
1963	333,880	309,090	225,100	265,603	1,133,673
1964	341,030	407,680	236,513	285,824	1,271,047
1965	353,518	401,259	240,949	293,339	1,289,065
1966	355,745	402,487	243,107	303,981	1,305,320
1967	352,936	427,744	244,038	308,153	1,332,871
1968	357,232	362,095	247,924	320,292	1,287,543
1969	379,416	412,992	254,863	329,123	1,376,394
1970	371,743	429,690	271,063	347,838	1,420,334
1971	364,070	432,195	286,692	362,063	1,445,020
1972	390,292	422,364	252,871	378,620	1,444,147
1973	394,290	449,670	251,593	397,203	1,492,756
1974	394,631	439,112	242,846	376,547	1,453,136
1975	404,379	440,354	214,120	374,707	1,433,560
1976	398,248	429,629	217,207	381,250	1,426,334
1977	398,140	442,200	229,766	385,013	1,455,119
1978 1979	400,146	450,758	241,125	399,512 393,724	1,491,541 1,455,112
1979	382,028 392,460	427,816 446,292	251,544 255,858	404,734	1,499,344
1981	395,125	448,323	269,854	427,381	1,540,683
1982	414,984	470,785	253,499	433,744	1,573,012
1983	413,152	491,153	263,510	441,164	1,608,979
1984	428,541	496,949	262,985	453,775	1,642,250
1985	476,032	538,263	275,858	468,452	1,758,605
1986	469,711	546,896	274,693	485,751	1,777,051
1987	460,092	530,228	289,642	486,639	1,766,601
1988	460,858	520,282	293,550	490,179	1,764,869
1989	461,102	539,381	275,358	487,693	1,763,534
1990	448,713	539,563	289,066	482,243	1,759,585
1991	447,969	533,368	295,265	467,501	1,744,103
1992	443,145	537,353	300,203	476,872	1,757,573
1993	431,874	542,306	282,159	473,069	1,729,408
1994	448,263	526,044	263,351	473,799	1,711,457
1995	464,903	521,882	293,574	482,098	1,762,457
1996 1997	463,482 511,410	530,950 546,750	281,116 283,686	493,194 504,788	1,768,742 1,846,634
1997	523,690	560,062	203,000	522,512	1,900,254
1998	516,507	563,182	303,966	549,352	1,933,007
2000	514,767	578,770	313,504	548,465	1,955,506
2000	427,321	568,759	257,937	458,944	1,712,961
2002	467,080	551,831	305,300	532,839	1,857,050
2003	493,418	549,510	307,034	547,449	1,897,411
2004	507,589	552,421	312,159	536,396	1,908,565
	,	<b>-</b> , - <b>-</b> ·	,		.,,

# Average Daily Manhattan River Crossings

1948-2004 Average Annual Growth Rate 1.5%



# New York City Motor Vehicle Registrations 1915-2004



Note: As of 1992, registration data are not strictly comparable to earlier data because of a revised method adopted by NY State Department of Motor Vehicles.

# 10-Year Traffic Growth Rate Trends Manhattan Crossings 1954-2004

East River Bridges	1954-1964	1964-1974	1974-1984	1984-1994	1994-2004
Brooklyn	8.0%	2.8%	1.1%	1.5%	- 0.7%
Manhattan	- 3.4%	1.4%	2.3%	- 2.0%	- 0.8%
Queensboro	2.4%	1.4%	- 1.1%	- 0.5%	1.4%
Williamsburg	0.0%	- 0.1%	1.0%	- 1.3%	1.4%
Total	1.5%	1.4%	0.5%	- 0.4%	0.5%
Harlem River Bridges					
Alexander Hamilton	Opened Jan. 1963	3.7%	1.5%	0.7%	- 0.1%
Broadway	3.4%	1.2%	1.8%	1.6%	- 0.0%
Macombs Dam	1.2%	1.8%	2.1%	- 2.6%	- 2.1%
Madison Avenue	- 2.6%	0.8%	0.5%	- 2.4%	9.8%
Third Avenue	5.7%	- 1.5%	0.7%	1.4%	- 3.0%
University Heights	4.1%	1.7%	0.0%	- 0.1%	4.8%
Washington	2.7%	1.8%	1.0%	1.5%	1.1%
Willis Avenue	3.8%	- 1.7%	1.6%	0.1%	0.5%
145th Street	0.0%	- 2.4%	1.3%	- 0.5%	1.5%
Total	3.8%	1.1%	1.3%	0.3%	0.6%
MTABT Facilities					
Brooklyn-Battery Tunnel	0.5%	- 0.9%	2.4%	- 0.4%	- 1.9%
Henry Hudson Bridge	- 3.1%	- 1.1%	- 0.2%	3.8%	2.5%
Queens-Midtown Tunnel	5.2%	1.4%	1.3%	0.1%	1.9%
Triborough (Manhattan Plz)	0.8%	2.5%	2.8%	- 0.7%	1.1%
Total	0.7%	0.8%	1.9%	0.4%	1.1%
PANYNJ Facilities					
George Washington Bridge	3.9%	4.5%	2.2%	- 0.6%	2.1%
Holland Tunnel	0.7%	1.5%	1.8%	2.8%	- 1.0%
Lincoln Tunnel	4.1%	2.4%	1.9%	- 0.2%	0.4%
Total	3.2%	3.4%	2.0%	0.1%	1.1%
Grand Total	2.3%	1.7%	1.4%	0.1%	0.8%

# Average Daily Manhattan River Motor Vehicle Crossings vs. Annual Subway Ridership

Year 1948	Daily Manhattan River Crossings 670,007	Annual Subway Ridership (millions) 2,031	Year	Daily Manhattan River Crossings	Annual Subway Ridership (millions)
1948					
1949	694,457 771,407	1,764 1,681			
1950	864,973	1,636	1981	1,540,683	1,011
1952	859,480	1,574	1981	1,573,012	989
1952	936,467	1,552	1983	1,608,979	1,005
1953	940,969	1,416	1984	1,642,250	997
1954	972,633	1,378	1985	1,758,605	1,010
1955	1,009,270	1,363	1986	1,777,051	1,010
1950	1,068,524	1,355	1987	1,766,601	1,058
1958	1,088,124	1,319	1988	1,764,869	1,038
1959	1,123,302	1,324	1989	1,763,534	1,074
1960	1,138,247	1,345	1990	1,759,585	1,073
1961	1,114,350	1,363	1990	1,744,103	995
1962	1,115,056	1,370	1992	1,757,573	997
1963	1,133,673	1,362	1993	1,729,408	1,030
1964	1,271,047	1,375	1994	1,711,457	1,081
1965	1,289,065	1,363	1995	1,762,457	1,093
1966	1,305,320	1,296	1996	1,768,742	1,110
1967	1,332,871	1,298	1997	1,846,634	1,130
1968	1,287,543	1,303	1998	1,900,254	1,199
1969	1,376,394	1,330	1999	1,933,007	1,283
1970	1,420,334	1,258	2000	1,955,506	1,381
1971	1,445,020	1,197	2000	1,712,961	1,405
1972	1,444,147	1,145	2002	1,857,050	1,413
1973	1,492,756	1,102	2003	1,897,411	1,384
1974	1,453,136	1,100	2004	1,908,565	1,426
1975	1,433,560	1,054	2001	1,000,000	1,120
1976	1,426,334	1,010			
1977	1,455,119	998			
1978	1,491,541	1,042			
1979	1,455,112	1,077			
1980	1,499,344	1,009			
	1,100,011	1,000			
Percent		<u>.</u>		_	
Changes	Average	Annual		Average	Annual
	Daily	Subway		Daily	Subway
Period	Crossings	Ridership	Period	Crossings	Ridership
1950-1960	+ 47.6 %	- 20.0 %	1990-2000	+ 11.1 %	+ 34.3 %
1960-1970	+ 24.8 %	- 6.5 %	2000-2004	- 2.4 %	+ 3.3 %
1970-1980	+ 5.6 %	- 19.8 %	1948-2004	+184.9 %	- 29.8 %
1980-1990	+ 17.4 %	+ 1.9 %			



# N.Y.C. Annual Subway Passengers 1948-2004



#### **PAST & PRESENT PASSENGER CAR TOLL STRUCTURES**

#### MTA BRIDGES & TUNNELS FACILITIES

#### Tolls collected both directions

	Brooklyn Battery Tunnel	Queens Midtown Tunnel	Triborough Bridge	Henry Hudson Bridge
Prior to Jan. 1972	\$ 0.35	\$ 0.25	\$ 0.25	\$ 0.10
Jan. 1972	0.70	0.50	0.50	0.25
Sep. 1975	0.75	0.75	0.75	0.50
May 1980	1.00	1.00	1.00	0.60
Apr. 1982	1.25	1.25	1.25	0.90
Jan. 1984	1.50	1.50	1.50	0.90
Jan. 1986	1.75	1.75	1.75	1.00
Feb. 1987	2.00	2.00	2.00	1.00
July 1989	2.50	2.50	2.50	1.25
Jan. 1993	3.00	3.00	3.00	1.50
Mar. 1996	3.50	3.50	3.50	1.75
May 2003	4.00	4.00	4.00	2.00

\$0.50 discount on all MTABT facilities with EZ Pass.

#### PORT AUTHORITY OF NEW YORK & NEW JERSEY

#### Tolls collected eastbound only

	George Washington Bridge	Holland Tunnel	Lincoln Tunnel
Aug. 1970	\$ 1.00	\$ 1.00	\$ 1.00
May 1975	1.50	1.50	1.50
Jan. 1984	2.00	2.00	2.00
Apr. 1987	3.00	3.00	3.00
Apr. 1991	4.00	4.00	4.00
Mar. 2001	6.00	6.00	6.00

\$1.00 discount on PANYNJ facilities with *EZ Pass* weekdays 6-9am & 4-7pm, and weekends noon-8pm.

\$2.00 discount on PANYNJ facilities with *EZ Pass* during all other hours.

One way toll collection system initiated on PANYNJ facilities August 12, 1970. Prior to that, tolls of \$ 0.50 were collected each way from date each facility opened.

# East River Bridges Average Daily Traffic Volumes 1948 - 2004

Year	Brooklyn Bridge	Manhattan Bridge	Queensboro Bridge	Williamsburg Bridge	Totals
1948 1949	37,011 37,244	86,717	83,201 88,821	47,139 54,448	254,068 260,933
1949		80,420			
	13,397	84,027	84,863	57,940	240,227
1951	14,865	100,826	90,922	62,739	269,352
1952	16,907	96,476	85,748	62,573	261,704
1953	14,513	94,320	106,391	77,502	292,726
1954	42,455	77,698	101,285	76,465	297,903
1955	53,964	66,968	91,958	80,743	293,633
1956	54,981	69,656	90,786	82,443	297,866
1957	23,852	89,793	93,676	89,707	297,028
1958	43,089	82,128	100,555	78,698	304,470
1959	53,115	74,329	103,522	81,465	312,431
1960	73,486	60,481	107,536	81,157	322,660
1961	68,997	62,797	104,505	80,514	316,813
1962	78,850	51,450	105,930	81,940	318,170
1963	78,770	58,510	116,350	80,250	333,880
1964	80,230	59,250	120,900	80,650	341,030
1965	84,141	71,222	117,588	80,567	353,518
1966	89,124	63,693	122,896	80,032	355,745
1967	87,387	75,741	124,033	65,775	352,936
1968	72,475	79,906	130,777	74,074	357,232
1969	97,565	75,473	132,553	73,825	379,416
1970	100,050	72,077	126,554	73,062	371,743
1971	102,535	68,681	120,555	72,299	364,070
1972	103,815	73,803	136,455	76,219	390,292
1973	102,834	73,401	138,066	79,989	394,290
1974	99,959	77,198	138,560	78,914	394,631
1975	103,750	74,320	144,252	82,057	404,379
1976	102,590	68,057	145,130	82,471	398,248
1977	104,532	64,835	146,283	82,490	398,140
1978	104,848	74,257	138,415	82,626	400,146
1979	91,319	75,403	133,966	81,340	382,028
1980	103,954	77,914	127,929	82,663	392,460
1981	102,572	79,589	127,864	85,100	395,125
1982	110,991	87,760	136,864	79,369	414,984
1983	115,825	85,222	125,158	86,947	413,152
1984	110,432	89,104	134,107	94,898	428,541
1985	116,929	100,825	150,892	107,386	476,032
1986	126,555	77,784	158,191	107,181	469,711
1987	123,523	77,519	151,688	107,362	460,092
1988	129,153	75,221	153,841	102,643	460,858
1989	131,951	68,593	152,591	107,967	461,102
1990	129,626	69,550	140,063	109,474	448,713
1991	128,491	72,695	131,438	115,345	447,969
1992	125,643	78,117	141,078	98,307	443,145
1993	134,793	74,526	135,964	86,591	431,874
1994	134,837	78,418	151,483	83,525	448,263
1995	131,883	75,126	157,306	100,588	464,903
1996	131,872	81,075	161,965	88,570	463,482
1997	147,898	83,209	184,179	96,124	511,410
1998	144,131	78,172	192,119	109,268	523,690
1999	127,065	92,311	189,190	107,941	516,507
2000	147,767	75,684	182,940	108,376	514,767
2001	95,586	73,064	176,469	82,202	427,321
2002	121,145	66,152	176,419	103,364	467,080
2003	134,444	73,767	184,964	100,243	493,418
2004	137,563	79,129	180,369	110,528	507,589

# Houry Vehicular Volumes Brooklyn Bridge - 2004

		East	bound to	Brookly	n		Westbound to Manhattan						
_		С	ommuter	С	ommercia			(	Commuter	С	ommercia	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						2,808						1,447	4,255
1-2am						1,718						844	2,562
2-3am						1,094						548	1,642
3-4am						745						530	1,275
4-5am						791						942	1,733
5-6am						1,196						2,370	3,566
6-7am						2,316						3,969	6,285
7-8am	2,672	2	114	1	70	2,859	3,803	19	38	3	264	4,127	6,986
8-9am	2,740	31	130	0	92	2,993	4,127	7	67	9	250	4,460 **	7,453
9-10am	2,533	21	83	2	148	2,787	3,547	6	67	5	341	3,966	6,753
10-11am	2,289	4	92	0	138	2,523	3,013	3	138	8	167	3,329	5,852
11-12am	2,392	1	98	0	75	2,566	2,722	7	152	4	170	3,055	5,621
12-1pm	2,393	1	118	3	119	2,634	2,751	0	124	3	124	3,002	5,636
1-2pm	2,569	1	151	0	108	2,829	2,915	60	145	3	157	3,280	6,109
2-3pm	3,113	11	91	1	119	3,335	3,398	6	213	1	139	3,757	7,092
3-4pm	3,561	21	64	0	75	3,721	3,529	12	155	0	144	3,840	7,561
4-5pm	3,540	11	91	0	37	3,679	3,490	7	252	1	119	3,869	7,548
5-6pm	3,859	4	99	1	25	3,988 **	3,605	18	189	1	177	3,990	7,978 **
6-7pm	3,642	3	74	5	43	3,767	3,427	4	155	1	119	3,706	7,473
7-8pm						3,645						3,607	7,252
8-9pm						3,698						3,546	7,244
9-10pm						3,559						3,513	7,072
10-11pm						3,380						3,456	6,836
11-12pm						3,116						2,663	5,779
Totals						65,747						71,816	137,563
7-10am	7,945	54	327	3	310	8,639	11,477	32	172	17	855	12,553	21,192
10am-1pm	7,074	6	308	3	332	7,723	8,486	10	414	15	461	9,386	17,109
1-4pm	9,243	33	306	1	302	9,885	9,842	78	513	4	440	10,877	20,762
4-7pm	11,041	18	264	6	105	11,434	10,522	29	596	3	415	11,565	22,999
7am-7pm	35,303	111	1,205	13	1,049	37,681	40,327	149	1,695	39	2,171	44,381	82,062

Based on October 1996 Classification Survey Data

<b>Houry Vehicular Volumes</b>
Manhattan Bridge - 2004

		East	tbound to	Brookly	'n		Westbound to Manhattan						
		С	commuter	С	ommercia	 		(	Commuter	C	Commercia	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						1,636						1,057	2,693
1-2am						1,023						734	1,757
2-3am						708						557	1,265
3-4am						543						494	1,037
4-5am						572						572	1,144
5-6am						733						1,366	2,099
6-7am						1,274						2,339	3,613
7-8am	774	63	156	453	153	1,599	1,535	99	224	461	409	2,728 **	4,327
8-9am	839	152	150	510	173	1,824	1,394	41	232	507	519	2,693	4,517 **
9-10am	611	96	186	554	211	1,658	1,058	37	175	642	504	2,416	4,074
10-11am	603	26	169	540	244	1,582	843	37	176	784	436	2,276	3,858
11-12am	628	27	163	537	259	1,614	861	37	190	678	437	2,203	3,817
12-1pm	587	22	111	495	341	1,556	927	44	235	598	241	2,045	3,601
1-2pm	550	26	199	469	341	1,585	941	50	198	642	239	2,070	3,655
2-3pm	631	18	209	425	323	1,606	1,011	35	142	500	403	2,091	3,697
3-4pm	1,036	80	327	573	442	2,458	822	44	181	291	247	1,585	4,043
4-5pm	1,310	65	301	515	607	2,798	920	25	107	279	238	1,569	4,367
5-6pm	1,483	49	283	454	614	2,883 **	1,012	39	165	212	183	1,611	4,494
6-7pm	1,434	43	369	388	392	2,626	1,137	24	131	146	151	1,589	4,215
7-8pm						2,358						1,451	3,809
8-9pm						2,106						1,320	3,426
9-10pm						1,979						1,311	3,290
10-11pm						1,932						1,344	3,276
11-12pm						1,823						1,232	3,055
Totals						40,476						38,653	79,129
7-10am	2,224	311	492	1,517	537	5,081	3,987	177	631	1,610	1,432	7,837	12,918
10am-1pm	1,818	75	443	1,572	844	4,752	2,631	118	601	2,060	1,114	6,524	11,276
1-4pm	2,217	124	735	1,467	1,106	5,649	2,774	129	521	1,433	889	5,746	11,395
4-7pm	4,227	157	953	1,357	1,613	8,307	3,069	88	403	637	572	4,769	13,076
7am-7pm	10,486	667	2,623	5,913	4,100	23,789	12,461	512	2,156	5,740	4,007	24,876	48,665

Based on October 1996 Classification Survey Data

# Houry Vehicular Volumes Queensboro Bridge - 2004

		Eas	stbound t	o Queens	5		Westbound to Manhattan							
		C	Commuter	С	ommercia			(	Commuter	С	commercial		2-Way	
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals	
12-1am						4,072						1,952	6,024	
1-2am						2,967						1,335	4,302	
2-3am						1,906						1,125	3,031	
3-4am						1,490						1,318	2,808	
4-5am						1,641						2,096	3,737	
5-6am						2,106						4,150	6,256	
6-7am						3,009						6,338	9,347	
7-8am	2,513	117	246	102	168	3,146	5,165	108	287	289	740	6,589 **	9,735	
8-9am	2,290	173	248	173	152	3,036	4,106	64	283	344	860	5,657	8,693	
9-10am	1,809	168	207	219	179	2,582	3,476	57	353	293	690	4,869	7,451	
10-11am	2,616	83	194	239	329	3,461	2,731	55	245	342	524	3,897	7,358	
11-12am	2,517	75	276	225	441	3,534	2,659	80	281	277	418	3,715	7,249	
12-1pm	2,909	91	209	202	483	3,894	2,973	46	236	217	318	3,790	7,684	
1-2pm	2,820	69	344	310	536	4,079	3,007	94	231	235	264	3,831	7,910	
2-3pm	3,608	74	221	402	533	4,838	3,282	69	245	196	438	4,230	9,068	
3-4pm	4,418	145	164	427	582	5,736	3,704	42	278	149	313	4,486	10,222	
4-5pm	5,097	184	194	455	656	6,586 **	3,671	36	216	122	224	4,269	10,855 **	
5-6pm	4,857	208	190	341	564	6,160	4,143	34	160	58	163	4,558	10,718	
6-7pm	4,329	163	239	101	359	5,191	3,418	51	212	66	164	3,911	9,102	
7-8pm						4,854						3,865	8,719	
8-9pm						4,959						3,471	8,430	
9-10pm						4,597						3,094	7,691	
10-11pm						4,336						2,834	7,170	
11-12pm						4,250						2,559	6,809	
Totals						92,430						87,939	180,369	
7-10am	6,612	458	701	494	499	8,764	12,747	229	923	926	2,290	17,115	25,879	
10am-1pm	8,042	249	679	666	1,253	10,889	8,363	181	762	836	1,260	11,402	22,291	
1-4pm	10,846	288	729	1,139	1,651	14,653	9,993	205	754	580	1,015	12,547	27,200	
4-7pm	14,283	555	623	897	1,579	17,937	11,232	121	588	246	551	12,738	30,675	
7am-7pm	39,783	1,550	2,732	3,196	4,982	52,243	42,335	736	3,027	2,588	5,116	53,802	106,045	

Based on October 1996 Classification Survey Data

Houry Vehicular Volumes
Williamsburg Bridge - 2004

		Eas	tbound to	Brookly	'n		Westbound to Manhattan						
_		C	Commuter	С	ommercia			(	Commuter	С	ommercia	d	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						2,663						1,599	4,262
1-2am						1,534						1,128	2,662
2-3am						1,039						718	1,757
3-4am						777						708	1,485
4-5am						762						952	1,714
5-6am						1,110						2,063	3,173
6-7am						1,827						3,180	5,007
7-8am	1,573	25	257	193	118	2,166	2,245	104	493	348	373	3,563	5,729
8-9am	1,527	134	265	220	168	2,314	2,179	46	551	321	470	3,567 **	5,881
9-10am	1,227	92	359	220	146	2,044	2,021	43	494	306	327	3,191	5,235
10-11am	1,246	48	297	461	86	2,138	1,732	33	467	280	263	2,775	4,913
11-12am	1,226	24	310	456	121	2,137	1,497	32	440	283	276	2,528	4,665
12-1pm	1,323	15	374	332	185	2,229	1,486	31	396	219	270	2,402	4,631
1-2pm	1,453	26	383	379	178	2,419	1,386	67	539	236	209	2,437	4,856
2-3pm	1,731	36	534	401	71	2,773	1,856	42	449	179	230	2,756	5,529
3-4pm	2,164	78	485	399	188	3,314	2,015	36	390	191	241	2,873	6,187
4-5pm	2,390	98	447	380	214	3,529 **	1,867	35	450	122	206	2,680	6,209 **
5-6pm	2,377	73	449	271	255	3,425	1,932	39	456	130	217	2,774	6,199
6-7pm	2,397	26	394	139	197	3,153	1,864	34	545	119	226	2,788	5,941
7-8pm						3,032						2,600	5,632
8-9pm						2,967						2,196	5,163
9-10pm						2,611						2,121	4,732
10-11pm						2,435						2,137	4,572
11-12pm						2,488						1,906	4,394
Totals						54,886						55,642	110,528
7-10am	4,327	251	881	633	432	6,524	6,445	193	1,538	975	1,170	10,321	16,845
10am-1pm	3,795	87	981	1,249	392	6,504	4,715	96	1,303	782	809	7,705	14,209
1-4pm	5,348	140	1,402	1,179	437	8,506	5,257	145	1,378	606	680	8,066	16,572
4-7pm	7,164	197	1,290	790	666	10,107	5,663	108	1,451	371	649	8,242	18,349
7am-7pm	20,634	675	4,554	3,851	1,927	31,641	22,080	542	5,670	2,734	3,308	34,334	65,975

Based on October 1996 Classification Survey Data

# Harlem River Bridges Average Daily Traffic Volumes 1948 - 2004

Year	Alexander Hamilton	Broadway	Macombs Dam	Madison Avenue	Third Avenue
1948		16,020	33,608	27,222	31,403
1949		17,369	23,854	17,363	20,024
1950		15,462	28,641	27,933	34,984
1951	Bridge	16,374	31,072	33,576	51,478
1952	Opened	17,412	36,100	27,468	34,023
1953	Jan. 1963	16,821	35,331	24,382	37,593
1954		15,958	27,911	23,408	33,667
1955		17,046	27,914	34,681	38,201
1956		17,960	32,761	46,591	42,735
1957		20,345	55,609	40,860	47,269
1958		22,132	50,227	33,393	61,367
1959 1960		25,491 23,025	48,720 50,865	27,967 22,541	56,525 68,079
1960		21,097	32,447	28,375	61,584
1962		19,170	39,580	25,400	53,580
1963		23,110	43,450	27,090	63,840
1964	87,840	25,020	31,050	31,170	63,250
1965	125,133	17,555	37,451	26,315	55,644
1966	104,559	22,438	39,922	28,865	70,938
1967	135,803	22,844	35,595	27,683	52,931
1968	92,771	23,621	33,875	27,658	41,243
1969	132,487	22,224	38,845	28,219	57,748
1970	141,609	23,115	46,523	24,941	48,110
1971	137,881	28,232	40,489	28,891	50,548
1972	142,139	25,178	39,702	26,923	47,454
1973	137,133	24,408	38,349	34,815	60,415
1974	144,909	21,825	40,934	30,425	54,770
1975	134,013	30,638	38,995	29,823	62,079
1976	137,141	26,453	36,065	27,838	54,957
1977 1978	158,710 151,342	26,465 25,145	33,539	29,832 34,938	52,969
1978	143,973	25,145 27,673	35,764 37,145	29,036	54,177 54,428
1980	152,852	29,838	37,464	27,476	54,152
1981	148,609	30,485	42,064	29,456	51,483
1982	156,038	30,846	45,178	30,485	60,236
1983	161,772	29,875	42,747	30,715	67,813
1984	164,734	28,338	46,870	33,101	56,706
1985	171,602	33,086	52,497	37,956	59,907
1986	175,635	32,314	50,602	39,809	64,404
1987	180,908	31,934	48,021	31,506	62,089
1988	172,970	33,047	43,318	31,321	62,379
1989	183,661	35,066	43,450	31,688	64,849
1990	192,848	41,705	41,113	32,458	63,516
1991	187,309	40,444	42,393	34,826	65,787
1992	176,279	35,184	42,022	32,907	66,967
1993	180,507	33,752	39,251	32,432	68,812
1994	178,522	32,833	39,876	22,923	66,104
1995 1996	175,279 176,856	42,555 40,040	41,571 40,031	22,739 17,948	68,663 67,206
1990	176,102	34,645	44,033	28,646	71,365
1998	176,632	35,770	42,027	32,922	70,757
1999	180,201	35,412	41,813	38,102	68,544
2000	177,899	37,990	21,008	47,583	73,121
2001	168,605	41,175	39,615	43,331	72,756
2002	168,079	38,287	18,878	49,487	58,949
2002	182,704	36,888	42,254	41,575	43,065
2004	175,323	35,190	40,558	48,723	47,053
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# Harlem River Bridges (cont'd) Average Daily Traffic Volumes 1948 - 2004

Year	University Heights	Washington	Willis Avenue	145th Street	Totals
1948	21,706	29,374	29,648	18,196	
1948	14,098	32,122	29,040 42,772	25,908	207,177 193,510
1950	24,986	29,541	38,708	22,416	222,671
1951	25,270	28,599	35,958	26,872	249,199
1952	21,527	28,270	33,207	24,189	222,196
1953	29,240	37,298	38,579	29,385	248,629
1954	22,979	39,339	46,675	26,119	236,056
1955	18,151	33,988	44,809	35,449	250,239
1956	21,834	30,598	43,752	30,550	266,781
1957	34,077	38,861	51,395	28,114	316,530
1958	37,078	50,100	49,773	25,677	329,747
1959	33,580	51,652	58,705	39,709	342,349
1960 1961	36,763 43,749	54,008 61,542	59,050 50,902	30,868 33,767	345,199 333,463
1962	35,940	56,110	55,910	27,540	313,230
1963	26,030	32,760	65,290	27,520	309,090
1964	31,490	41,410	65,190	31,260	407,680
1965	23,458	35,560	53,219	26,924	401,259
1966	25,700	31,104	53,677	25,284	402,487
1967	26,990	33,921	69,609	22,368	427,744
1968	26,126	35,218	58,730	22,853	362,095
1969	29,941	19,136	60,192	24,200	412,992
1970	26,718	33,661	61,433	23,580	429,690
1971	29,622	38,522	53,609	24,401	432,195
1972	31,620	36,812	49,431	23,105	422,364
1973	33,503	46,079	51,537	23,431	449,670
1974	29,297	42,014	53,322	21,616	439,112
1975	29,111	41,522	52,984	21,189	440,354
1976	34,494	39,058	53,873	19,750	429,629
1977 1978	29,128 35,883	38,185 37,690	52,484 54,335	20,888 21,484	442,200
1978	31,796	37,348	44,851	21,464 21,566	450,758 427,816
1980	32,562	38,061	52,061	21,826	446,292
1981	34,454	38,061	52,561	21,150	448,323
1982	25,416	44,168	55,762	22,656	470,785
1983	32,233	42,186	60,296	23,516	491,153
1984	30,485	46,896	66,017	23,802	496,949
1985	37,553	51,302	65,638	28,722	538,263
1986	36,192	54,935	66,824	26,181	546,896
1987	37,223	46,094	67,558	24,895	530,228
1988	38,542	48,025	64,862	25,818	520,282
1989	42,246	49,092	66,012	23,317	539,381
1990	19,768	61,668	62,315	24,172	539,563
1991	18,220	57,526	60,415	26,448	533,368
1992	39,232	51,925	66,522	26,315	537,353
1993 1994	38,895 38,134	52,795 57,009	70,472 67,344	25,390 23,299	542,306 526,044
1994	21,238	56,372	67,716	25,749	521,882
1996	35,280	56,204	70,229	27,156	530,950
1997	39,639	54,708	73,461	24,151	546,750
1998	41,640	57,307	78,145	24,862	560,062
1999	42,287	58,907	71,555	26,361	563,182
2000	45,557	68,075	73,175	34,362	578,770
2001	46,381	57,443	72,901	26,552	568,759
2002	45,311	63,609	73,435	35,796	551,831
2003	50,126	63,154	66,710	23,034	549,510
2004	47,350	57,530	74,700	25,994	552,421

		Ea	stboun	d to Broi	nx		Westbound to Manhattan						
-			Commut	er C	ommerci	al		(	Commut	er C	ommerci	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						2,128						2,428	4,556
1-2am						1,778						1,930	3,708
2-3am						1,569						1,487	3,056
3-4am						1,685						1,470	3,155
4-5am						2,120						1,896	4,016
5-6am						3,233						3,015	6,248
6-7am						4,698						4,543	9,241
7-8am	3,741	12	216	714	108	4,791 **	3,991	9	85	424	210	4,719 **	9,510 **
8-9am	3,207	4	209	806	187	4,413	3,916	32	32	455	144	4,579	8,992
9-10am	2,939	4	188	963	106	4,200	3,433	49	29	754	201	4,466	8,666
10-11am	3,747	3	89	293	42	4,174	3,704	26	16	400	135	4,281	8,455
11-12am	2,948	9	212	655	108	3,932	3,030	13	19	945	269	4,276	8,208
12-1pm	3,441	0	97	388	42	3,968	3,832	11	10	535	136	4,524	8,492
1-2pm	2,954	7	141	705	70	3,877	3,403	12	24	884	231	4,554	8,431
2-3pm	3,324	5	177	690	98	4,294	3,461	19	42	928	186	4,636	8,930
3-4pm	3,868	7	78	302	85	4,340	4,030	22	16	474	86	4,628	8,968
4-5pm	3,660	5	137	458	105	4,365	3,399	3	39	857	207	4,505	8,870
5-6pm	3,723	5	105	350	87	4,270	3,547	2	29	791	155	4,524	8,794
6-7pm	3,730	9	195	428	75	4,437	3,941	3	23	478	137	4,582	9,019
7-8pm						4,332						4,305	8,637
8-9pm						3,766						3,705	7,471
9-10pm						3,485						3,651	7,136
10-11pm						3,174						3,712	6,886
11-12pm						2,867						3,011	5,878
Totals						85,896						89,427	175,323
7-10am	9,887	20	613	2,483	401	13,404	11,340	90	146	1,633	555	13,764	27,168
10am-1pm	10,136	12	398	1,336	192	12,074	10,566	50	45	1,880	540	13,081	25,155
1-4pm	10,146	19	396	1,697	253	12,511	10,894	53	82	2,286	503	13,818	26,329
4-7pm	11,113	19	437	1,236	267	13,072	10,887	8	91	2,126	499	13,611	26,683
7am-7pm	41,282	70	1,844	6,752	1,113	51,061	43,687	201	364	7,925	2,097	54,274	105,335

# Hourly Vehicular Volumes Alexander Hamilton Bridge - 2004

Based on 1989 Classification Survey Data

# Hourly Vehicular Volumes Broadway Bridge - 2004

		Noi	rthboun	d to Bror	ıx			Southbound to Manhattan					
-		(	Commut	er Co	ommerci	al		(	Commute	er Co	ommercia	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses		Trucks	Vans	Totals	Totals
12-1am						291						265	556
1-2am						160						182	342
2-3am						106						95	201
3-4am						73						97	170
4-5am						102						147	249
5-6am						213						364	577
6-7am						459						843	1,302
7-8am	628	35	19	63	26	771	1,226	56	39	28	41	1,390 **	2,161
8-9am	761	55	19	33	26	894	1,212	42	28	43	42	1,367	2,261
9-10am	620	21	3	25	55	724	814	31	24	48	37	954	1,678
10-11am	658	16	2	33	23	732	747	20	11	34	9	821	1,553
11-12am	670	20	8	27	41	766	693	23	23	49	50	838	1,604
12-1pm	748	21	6	21	23	819	870	22	4	18	11	925	1,744
1-2pm	825	25	3	28	29	910	892	25	9	21	17	964	1,874
2-3pm	891	25	1	38	76	1,031	961	30	23	34	17	1,065	2,096
3-4pm	1,082	26	9	14	36	1,167	1,177	33	14	19	11	1,254	2,421
4-5pm	1,204	42	29	25	59	1,359	1,140	30	21	36	35	1,262	2,621 **
5-6pm	1,256	29	8	12	65	1,370 **	1,131	29	30	18	23	1,231	2,601
6-7pm	1,185	23	0	13	116	1,337	1,060	28	25	18	8	1,139	2,476
7-8pm						1,084						1,010	2,094
8-9pm						788						758	1,546
9-10pm						648						648	1,296
10-11pm						493						480	973
11-12pm						400						394	794
Totals						16,697						18,493	35,190
7-10am	2,009	111	41	121	107	2,389	3,252	129	91	119	120	3,711	6,100
10am-1pm	2,076	57	16	81	87	2,317	2,310	65	38	101	70	2,584	4,901
1-4pm	2,798	76	13	80	141	3,108	3,030	88	46	74	45	3,283	6,391
4-7pm	3,645	94	37	50	240	4,066	3,331	87	76	72	66	3,632	7,698
7am-7pm	10,528	338	107	332	575	11,880	11,923	369	251	366	301	13,210	25,090

Based on 1989 Classification Survey Data

Hourly Vehicular Volumes
Macombs Dam Bridge - 2004

	Eastbound to Bronx						Westbound to Manhattan						
_		(	Commut	er Co	ommerci	al			Commute	er Co	ommerci	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						381						376	757
1-2am						238						220	458
2-3am						167						154	321
3-4am						138						138	276
4-5am						145						162	307
5-6am						259						345	604
6-7am						549						901	1,450
7-8am	751	30	19	46	68	914	1,120	36	5	79	212	1,452	2,366
8-9am	852	12	15	52	88	1,019	1,254	11	2	99	177	1,543 **	2,562 **
9-10am	736	16	12	46	49	859	918	19	13	106	174	1,230	2,089
10-11am	674	6	2	29	36	747	895	8	7	39	54	1,003	1,750
11-12am	701	9	11	58	68	847	904	7	14	79	89	1,093	1,940
12-1pm	807	10	6	26	36	885	1,044	19	4	21	46	1,134	2,019
1-2pm	815	2	5	25	23	870	1,008	20	8	22	81	1,139	2,009
2-3pm	807	12	20	64	69	972	1,143	25	17	56	98	1,339	2,311
3-4pm	978	20	9	53	62	1,122	1,312	40	11	25	49	1,437	2,559
4-5pm	925	8	30	79	150	1,192	1,170	10	32	42	78	1,332	2,524
5-6pm	1,017	9	14	36	135	1,211	1,153	13	10	19	63	1,258	2,469
6-7pm	1,145	3	7	27	46	1,228 **	1,194	8	13	27	91	1,333	2,561
7-8pm						1,134						1,290	2,424
8-9pm						1,055						1,085	2,140
9-10pm						926						925	1,851
10-11pm						763						800	1,563
11-12pm						638						610	1,248
Totals						18,259						22,299	40,558
7-10am	2,339	58	46	144	205	2,792	3,292	66	20	284	563	4,225	7,017
10am-1pm	2,182	25	19	113	140	2,479	2,843	34	25	139	189	3,230	5,709
1-4pm	2,600	34	34	142	154	2,964	3,463	85	36	103	228	3,915	6,879
4-7pm 7am-7pm	3,087 10,208	20 137	51 150	142 541	331 830	3,631 11,866	3,517 13,115	31 216	55 136	88 614	232 1,212	3,923 15,293	7,554 27,159
	-,	-				,	-, -				,	,	,

Based on 1989 Classification Survey Data

# Hourly Vehicular Volumes Madison Avenue Bridge - 2004

	Eastbound to Bronx						Westbound to Manhattan						
-		(	Commut	er Co	ommerci	al			Commute	er C	ommerci	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses		Trucks	Vans	Totals	Totals
12-1am						949						375	1,324
1-2am						662						240	902
2-3am						402						189	591
3-4am						288						150	438
4-5am						242						248	490
5-6am						317						606	923
6-7am						837						1,484	2,321
7-8am	790	39	87	51	46	1,013	1,527	122	17	62	137	1,865 **	2,878
8-9am	845	58	75	44	55	1,077	1,455	121	34	77	150	1,837	2,914
9-10am	676	60	87	72	45	940	1,079	77	43	187	142	1,528	2,468
10-11am	744	34	45	33	41	897	915	76	25	25	82	1,123	2,020
11-12am	647	26	84	105	96	958	917	35	47	90	115	1,204	2,162
12-1pm	837	28	33	40	43	981	967	43	32	39	70	1,151	2,132
1-2pm	902	31	33	46	50	1,062	1,068	72	37	20	57	1,254	2,316
2-3pm	863	33	76	105	106	1,183	1,166	98	40	44	112	1,460	2,643
3-4pm	1,343	27	42	76	70	1,558	1,242	86	25	33	56	1,442	3,000
4-5pm	1,276	32	144	119	142	1,713 **	1,285	79	34	31	57	1,486	3,199 **
5-6pm	1,223	33	105	86	81	1,528	1,361	61	43	34	52	1,551	3,079
6-7pm	1,162	68	46	59	78	1,413	1,245	49	28	25	26	1,373	2,786
7-8pm						1,391						1,202	2,593
8-9pm						1,273						1,042	2,315
9-10pm						1,088						894	1,982
10-11pm						952						837	1,789
11-12pm						825						633	1,458
Totals						23,549						25,174	48,723
7-10am	2,311	157	249	167	146	3,030	4,061	320	94	326	429	5,230	8,260
10am-1pm	2,228	88	162	178	180	2,836	2,799	154	104	154	267	3,478	6,314
1-4pm	3,108	91	151	227	226	3,803	3,476	256	102	97	225	4,156	7,959
4-7pm	3,661	133	295	264	301	4,654	3,891	189	105	90	135	4,410	9,064
7am-7pm	11,308	469	857	836	853	14,323	14,227	919	405	667	1,056	17,274	31,597

Based on 1989 Classification Survey Data

# Hourly Vehicular Volumes Third Avenue Bridge - 2004

	Northbound to Bronx						Southbound to Manhattan						
_		(	Commute	er Co	ommercia	ıl			Commut	er C	ommerci	ial	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am												1,001	1,001
1-2am												657	657
2-3am												558	558
3-4am												624	624
4-5am		Bridge	is 1-way	/ southb	ound							1,002	1,002
5-6am		•	to Manh									1,843	1,843
6-7am												2,407	2,407
7-8am							1,570	32	242	327	270	2,441	2,441
8-9am							1,449	21	143	293	305	2,211	2,211
9-10am							1,557	26	205	304	240	2,332	2,332
10-11am							1,945	24	129	125	103	2,326	2,326
11-12am							1,478	41	240	284	175	2,218	2,218
12-1pm							1,974	59	102	114	88	2,337	2,337
1-2pm							1,786	81	156	136	233	2,392	2,392
2-3pm							1,651	82	206	203	238	2,380	2,380
3-4pm							2,314	69	80	65	58	2,586	2,586
4-5pm							2,175	50	117	112	130	2,584	2,584
5-6pm							2,325	46	96	81	69	2,617 **	2,617 **
6-7pm							2,294	47	93	62	68	2,564	2,564
7-8pm							, 					2,340	2,340
8-9pm												2,083	2,083
9-10pm												1,964	1,964
10-11pm												1,975	1,975
11-12pm												1,611	1,611
Totals												47,053	47,053
7-10am							4,576	79	590	924	815	6,984	6,984
10am-1pm							5,397	124	471	523	366	6,881	6,881
1-4pm							5,751	232	442	404	529	7,358	7,358
4-7pm							6,794	143	306	255	267	7,765	7,765
7am-7pm							22,518	578	1,809	2,106	1,977	28,988	28,988

Based on 1989 Classification Survey Data

	Eastbound to Bronx						Westbound to Manhattan						
-		(	Commut	er Co	ommerci	al		(	Commute	er Co	ommerci	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						540						434	974
1-2am						339						296	635
2-3am						270						200	470
3-4am						184						186	370
4-5am						231						295	526
5-6am						342						714	1,056
6-7am						663						1,245	1,908
7-8am	751	53	96	46	48	994	1,427	23	37	41	117	1,645 **	2,639
8-9am	897	10	95	68	87	1,157	1,266	13	27	51	103	1,460	2,617
9-10am	768	10	76	88	89	1,031	1,082	14	17	55	109	1,277	2,308
10-11am	842	4	43	41	33	963	1,128	4	4	31	68	1,235	2,198
11-12am	833	10	86	101	51	1,081	1,049	8	15	66	94	1,232	2,313
12-1pm	1,004	17	31	34	29	1,115	1,229	2	6	34	59	1,330	2,445
1-2pm	1,047	52	51	40	31	1,221	1,280	4	5	24	43	1,356	2,577
2-3pm	1,088	17	92	67	64	1,328 **	1,285	12	25	57	122	1,501	2,829
3-4pm	1,099	19	25	32	31	1,206	1,384	48	7	30	61	1,530	2,736
4-5pm	972	5	60	45	34	1,116	1,405	22	19	29	104	1,579	2,695
5-6pm	1,069	0	67	32	49	1,217	1,438	1	17	15	63	1,534	2,751
6-7pm	1,147	0	71	24	72	1,314	1,459	8	13	12	68	1,560	2,874 **
7-8pm						1,318						1,391	2,709
8-9pm						1,117						1,218	2,335
9-10pm						995						1,063	2,058
10-11pm						845						958	1,803
11-12pm						718						806	1,524
Totals						21,305						26,045	47,350
7-10am	2,416	73	267	202	224	3,182	3,775	50	81	147	329	4,382	7,564
10am-1pm	2,679	31	160	176	113	3,159	3,406	14	25	131	221	3,797	6,956
1-4pm	3,234	88	168	139	126	3,755	3,949	64	37	111	226	4,387	8,142
4-7pm	3,188	5	198	101	155	3,647	4,302	31	49	56	235	4,673	8,320
7am-7pm	11,517	197	793	618	618	13,743	15,432	159	192	445	1,011	17,239	30,982

# Hourly Vehicular Volumes University Heights Bridge - 2004

Based on 1989 Classification Survey Data

# Hourly Vehicular Volumes Washington Bridge - 2004

_	Eastbound to Bronx							Westbound to Manhattan						
-		(	Commute	er C	ommerci	al				Commute	er Co	ommerci	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals		Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						668							459	1,127
1-2am						405							290	695
2-3am						294							233	527
3-4am						234							228	462
4-5am						264							281	545
5-6am						413							590	1,003
6-7am						1,029							1,175	2,204
7-8am	1,571	60	34	54	115	1,834		1,230	57	109	36	25	1,457	3,291
8-9am	1,566	48	28	84	143	1,869		1,265	69	77	58	31	1,500	3,369
9-10am	1,204	39	26	95	91	1,455		1,023	35	52	40	27	1,177	2,632
10-11am	1,164	34	8	32	43	1,281		993	35	11	27	22	1,088	2,369
11-12am	1,187	28	17	65	75	1,372		1,011	48	30	32	38	1,159	2,531
12-1pm	1,246	42	19	25	60	1,392		1,219	32	11	23	18	1,303	2,695
1-2pm	1,450	35	6	37	56	1,584		1,278	32	18	21	15	1,364	2,948
2-3pm	1,462	36	27	71	84	1,680		1,268	60	45	54	42	1,469	3,149
3-4pm	1,907	45	13	37	96	2,098		1,462	46	46	46	22	1,622	3,720
4-5pm	2,077	49	63	76	231	2,496		1,409	40	71	87	48	1,655	4,151
5-6pm	2,370	44	66	47	125	2,652	**	1,545	31	47	35	44	1,702 **	4,354 **
6-7pm	2,018	26	36	27	89	2,196		1,364	37	55	19	30	1,505	3,701
7-8pm						1,839							1,351	3,190
8-9pm						1,629							1,175	2,804
9-10pm						1,403							1,001	2,404
10-11pm						1,154							887	2,041
11-12pm						926							692	1,618
Totals						32,167							25,363	57,530
7-10am	4,341	147	88	233	349	5,158		3,518	161	238	134	83	4,134	9,292
10am-1pm	3,597	104	44	122	178	4,045		3,223	115	52	82	78	3,550	7,595
1-4pm	4,819	116	46	145	236	5,362		4,008	138	109	121	79	4,455	9,817
4-7pm 7am-7pm	6,465 19,222	119 486	165 343	150 650	445 1,208	7,344 21,909		4,318 15,067	108 522	173 572	141 478	122 362	4,862 17,001	12,206 38,910

Based on 1989 Classification Survey Data

	Northbound to Bronx						Southbound to Manhattan						
-			Commut	er C	ommerci	al		(	Commut	er Co	ommercia	1	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						2,165						0	2,165
1-2am						1,194						0	1,194
2-3am						820						0	820
3-4am						795	This brid	ge is nor	mally 1	-way		0	795
4-5am						924	northbou					0	924
5-6am						1,536						0	1,536
6-7am						2,623	761	0	0	0	0	761	3,384
7-8am	2,636	78	123	153	106	3,096	803	0	0	0	0	803 **	3,899
8-9am	2,521	107	94	182	221	3,125	784	0	0	0	0	784	3,909
9-10am	2,163	127	106	259	239	2,894	486	0	0	0	0	486	3,380
10-11am	2,430	56	78	182	172	2,918						0	2,918
11-12am	2,123	37	125	305	282	2,872						0	2,872
12-1pm	2,757	47	58	170	116	3,148	In 2004, c	one lane	was rev	versed to		0	3,148
1-2pm	2,936	27	45	123	156	3,287	southbou	und 6-10a	am weel	kdays (fo	r	0	3,287
2-3pm	2,788	34	137	401	405	3,765	passenge	er cars o	nly) in c	order to		0	3,765
3-4pm	3,896	71	67	187	182	4,403	compens	sate for re	econstr	uction lar	ne	0	4,403
4-5pm	3,824	44	147	327	514	4,856	closures	on the T	hird Av	enue Bric	lge.	0	4,856
5-6pm	4,369	78	146	243	537	5,373 **						0	5,373 **
6-7pm	4,401	42	134	155	297	5,029						0	5,029
7-8pm						4,099						0	4,099
8-9pm						3,745						0	3,745
9-10pm						3,488						0	3,488
10-11pm						3,087						0	3,087
11-12pm						2,624						0	2,624
Totals						71,866						2,834	74,700
7-10am	7,320	312	323	594	566	9,115	2,073	0	0	0	0	2,073	11,188
10am-1pm	7,310	140	261	657	570	8,938	0	0	0	0	0	0	8,938
1-4pm	9,620	132	249	711	743	11,455	0	0	0	0	0	0	11,455
4-7pm	12,594	164	427	725	1,348	15,258	0	0	0	0	0	0	15,258
7am-7pm	36,844	748	1,260	2,687	3,227	44,766	2,073	0	0	0	0	2,073	46,839

# Hourly Vehicular Volumes Willis Avenue Bridge - 2004

Based on 1989 Classification Survey Data

Hourly Vehicular Volumes
145th Street Bridge - 2004

		Eas	stbound	d to Bron	x		Westbound to Manhattan						
		C	Commute	er Co	ommercia	al		(	Commute	er Co	ommerci	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						257						222	479
1-2am						174						137	311
2-3am						127						104	231
3-4am						99						106	205
4-5am						106						119	225
5-6am						152						235	387
6-7am						292						592	884
7-8am	492	24	32	32	8	588	941	43	19	41	37	1,081 **	1,669
8-9am	624	22	38	41	24	749	885	30	35	29	54	1,033	1,782
9-10am	512	12	35	55	22	636	565	19	34	26	60	704	1,340
10-11am	518	9	14	24	25	590	427	15	29	22	43	536	1,126
11-12am	324	10	19	44	28	425	358	9	36	37	43	483	908
12-1pm	562	12	17	40	17	648	596	11	11	9	15	642	1,290
1-2pm	587	12	33	31	17	680	605	30	11	15	9	670	1,350
2-3pm	609	18	33	104	44	808	618	24	29	28	41	740	1,548
3-4pm	832	21	23	40	28	944	704	27	8	7	10	756	1,700
4-5pm	873	14	57	97	54	1,095 **	738	16	14	8	20	796	1,891
5-6pm	886	10	50	73	66	1,085	769	17	13	9	12	820	1,905 **
6-7pm	816	26	28	22	45	937	652	21	5	3	9	690	1,627
7-8pm						856						617	1,473
8-9pm						727						487	1,214
9-10pm						636						417	1,053
10-11pm						375						392	767
11-12pm						306						323	629
Totals						13,292						12,702	25,994
7-10am	1,628	58	105	128	54	1,973	2,391	92	88	96	151	2,818	4,791
10am-1pm	1,404	31	50	108	70	1,663	1,381	35	76	68	101	1,661	3,324
1-4pm	2,028	51	89	175	89	2,432	1,927	81	48	50	60	2,166	4,598
4-7pm	2,575	50	135	192	165	3,117	2,159	54	32	20	41	2,306	5,423
7am-7pm	7,635	190	379	603	378	9,185	7,858	262	244	234	353	8,951	18,136

Based on 1989 Classification Survey Data

## Manhattan MTABT Facilities Average Daily Traffic Volumes 1948 - 2004

Year	Brooklyn- Battery Tunnel	Henry Hudson Bridge	Queens- Midtown Tunnel	Triborough Bridge Manh. Plz.	Manhattan Totals
1948	Opened	40,050	26,462	26,465	92,977
1949	05/25/1950	47,472	30,045	32,554	110,071
1950	37,258	53,559	34,044	36,995	161,856
1951	41,253	57,700	36,680	44,639	180,272
1952	45,366	61,592	38,866	48,503	194,327
1953	47,999	65,432	38,509	48,595	200,535
1954	45,120	69,025	38,185	52,286	204,616
1955	45,843	71,240	39,839	59,913	216,835
1956	48,054	69,477	49,544	64,460	231,535
1957	54,490	62,865	54,311	64,677	236,343
1958	53,789	57,321	58,321	62,982	232,413
1959	49,468	56,529	61,115	64,389	231,501
1960	48,970	56,675	62,008	63,115	230,768
1961	48,197	57,140	62,301	59,603	227,241
1962	48,173	59,548	65,038	60,251	233,010
1963	48,271	52,803	63,038	60,988	225,100
1964	51,893	50,768	67,713	66,139	236,513
1965	56,455	45,353	69,386	69,755	240,949
1966	57,674	44,043	69,850 60,416	71,540	243,107
1967 1968	57,611	43,409	69,416 66,422	73,602	244,038
1968	60,652 62,116	44,908 45,382	66,432 68,884	75,932 78,481	247,924 254,863
1909	62,042	46,720	77,180	85,121	271,063
1971	64,032	50,541	81,747	90,372	286,692
1972	52,065	45,818	74,936	80,052	252,871
1973	49,916	41,871	74,214	85,592	251,593
1974	46,620	38,331	75,219	82,676	242,846
1975	45,636	30,603	65,315	72,566	214,120
1976	52,444	30,557	65,881	68,325	217,207
1977	53,500	31,840	71,150	73,276	229,766
1978	58,252	33,605	72,696	76,572	241,125
1979	60,445	33,387	69,827	87,885	251,544
1980	62,386	31,817	73,216	88,439	255,858
1981	58,657	36,625	81,211	93,361	269,854
1982	56,189	30,923	78,229	88,158	253,499
1983	61,130	31,279	78,134	92,967	263,510
1984	58,032	34,898	74,808	95,247	262,985
1985	63,469	41,680	76,065	94,644	275,858
1986	60,778	49,005	71,478	93,432	274,693
1987	63,256	52,778	77,813	95,795	289,642
1988 1989	62,959	54,910	76,243	99,438	293,550
1989	59,254 60,512	50,556 57,528	72,828 71,186	92,720 99,840	275,358 289,066
1990	63,883	56,279	80,616	94,487	295,265
1992	62,510	58,660	81,835	97,198	300,203
1993	57,561	54,650	77,288	92,660	282,159
1994	57,013	58,291	68,511	79,536	263,351
1995	61,097	62,899	73,882	95,696	293,574
1996	57,091	58,759	72,285	92,981	281,116
1997	54,690	59,660	78,023	91,313	283,686
1998	61,091	59,339	79,697	93,863	293,990
1999	63,307	61,165	80,941	98,553	303,966
2000	63,242	66,304	80,879	103,079	313,504
2001	13,762	69,087	72,864	102,224	257,937
2002	56,976	70,731	82,834	94,759	305,300
2003	56,271	72,209	85,377	93,177	307,034
2004	54,488	73,114	86,599	97,958	312,159

MTABT Toll Increases 1/72, 9/75, 5/80, 4/82, 1/84, 1/86, 2/87, 7/89, 1/93, 3/96, & 5/03.

# Hourly Vehicular Volumes Metropolitan Transportation Authority Bridges & Tunnels 2004

	Brooklyn-Battery		Henry Hudson		Queens-Midtown			gh Bridge		als
	Tur	nnel	Brie	dge	Tur	nnel	(Mahatta	an Plaza)	Entering	Leaving
	N/B	S/B	S/B	N/B	W/B	E/B	W/B	E/B	Manhattan	Manhattan
12-1am	179	659	224	661	490	978	729	669	1,622	2,967
1-2am	102	289	111	268	185	467	274	314	672	1,338
2-3am	65	130	63	127	115	256	146	145	389	658
3-4am	63	70	56	73	125	164	128	159	372	466
4-5am	194	70	131	95	256	288	240	421	821	874
5-6am	734	111	502	158	985	661	971	1,068	3,192	1,998
6-7am	2,231	321	2,308	644	2,389	1,186	3,076	1,955	10,004	4,106
7-8am	3,173	621	3,642 **	1,569	3,580	1,380	4,481 **	2,362	14,876	5,932
8-9am	3,498 **	740	3,537	1,855	4,085 **	1,567	4,346	2,401	15,466 **	6,563
9-10am	2,951	732	3,050	1,297	3,944	1,563	3,528	2,328	13,473	5,920
10-11am	1,909	785	2,232	1,090	2,983	1,667	3,078	2,012	10,202	5,554
11-12am	1,545	797	1,931	1,125	2,628	1,725	2,825	1,975	8,929	5,622
12-1pm	1,313	1,004	1,741	1,245	2,439	1,985	2,623	2,063	8,116	6,297
1-2pm	1,301	1,101	1,635	1,436	2,382	2,266	2,555	2,294	7,873	7,097
2-3pm	1,453	1,458	1,840	1,883	2,281	2,632	2,936	2,658	8,510	8,631
3-4pm	1,468	1,885	2,424	2,310	2,565	3,012	3,211	3,048	9,668	10,255
4-5pm	1,540	2,415	2,667	2,725	2,646	3,048 **	3,428	3,186 **	10,281	11,374
5-6pm	1,690	2,670 **	3,075	3,134 **	2,814	2,978	3,501	3,004	11,080	11,786 **
6-7pm	1,371	2,229	3,058	2,935	2,609	2,841	3,387	2,743	10,425	10,748
7-8pm	1,097	1,802	2,069	2,874	2,038	2,381	2,770	2,548	7,974	9,605
8-9pm	776	1,580	1,178	2,036	1,610	2,252	2,035	2,078	5,599	7,946
9-10pm	612	1,284	879	1,749	1,324	2,091	1,677	1,716	4,492	6,840
10-11pm	482	954	611	1,549	1,067	1,803	1,433	1,404	3,593	5,710
11-12pm	341	693	369	943	727	1,141	1,075	954	2,512	3,731
Totals	30,088	24,400	39,333	33,781	46,267	40,332	54,453	43,505	170,141	142,018
7-10am	9,622	2,093	10,229	4,721	11,609	4,510	12,355	7,091	43,815	18,415
10am-1pm	4,767	2,586	5,904	3,460	8,050	5,377	8,526	6,050	27,247	17,473
1-4pm	4,222	4,444	5,899	5,629	7,228	7,910	8,702	8,000	26,051	25,983
4-7pm	4,601	7,314	8,800	8,794	8,069	8,867	10,316	8,933	31,786	33,908
7am-7pm	23,212	16,437	30,832	22,604	34,956	26,664	39,899	30,074	128,899	95,779

#### PANYNJ Manhattan - New Jersey Facilities Average Daily Traffic Volumes 1948 - 2004

	0	1948 - 200	4	
	George Washington	Hollond	Lincoln	
Year	Washington Bridge	Holland Tunnel	Lincoln Tunnel	Totals
1948	42,306	42,623	30,856	115,785
1949	49,261	45,167	35,515	129,943
1950	54,437	49,660	42,556	146,653
1951	64,516	53,792	47,842	166,150
1952	76,446	51,317	53,490	181,253
1953	84,398	53,270	56,909	194,577
1954	90,306	54,560	57,528	202,394
1955 1956	98,013 97,059	55,445 56,961	58,468 59,068	211,926 213,088
1950	98,110	56,801	63,712	218,623
1958	97,435	55,881	68,178	221,494
1959	105,334	57,926	73,761	237,021
1960	106,245	57,678	75,697	239,620
1961	104,107	56,277	76,449	236,833
1962	111,090	58,518	81,038	250,646
1963	127,452	58,814	79,337	265,603
1964	143,193	59,702	82,929	285,824
1965 1966	155,967 167,304	55,060 55,559	82,312 81,118	293,339 303,981
1967	173,093	54,181	80,879	308,153
1968	182,934	53,962	83,396	320,292
1969	189,817	54,438	84,868	329,123
1970	194,910	58,574	94,354	347,838
1971	210,749	57,968	93,346	362,063
1972	221,172	61,485	95,963	378,620
1973	232,686	64,731	99,786	397,203
1974 1975	211,955	64,765	99,827	376,547 374,707
1975	215,927 215,136	62,381 64,663	96,399 101,451	374,707 381,250
1977	222,897	63,015	99,101	385,013
1978	229,666	66,405	103,441	399,512
1979	232,739	61,403	99,582	393,724
1980	235,615	64,417	104,702	404,734
1981	250,804	68,750	107,827	427,381
1982	249,294	73,997	110,453	433,744
1983 1984	254,728 258,723	76,226 71,819	110,210 123,233	441,164
1985	275,934	76,121	116,397	453,775 468,452
1986	286,398	77,300	122,053	485,751
1987	288,642	73,655	124,342	486,639
1988	284,984	84,626	120,569	490,179
1989	281,812	84,429	121,452	487,693
1990	272,556	87,976	121,711	482,243
1991	262,491	87,502	117,508	467,501
1992	268,007	90,206	118,659	476,872
1993 1994	260,732 259,863	92,685 94,637	119,652 119,299	473,069 473,799
1994	266,029	96,310	119,759	482,098
1996	275,469	96,798	120,927	493,194
1997	282,293	100,986	121,509	504,788
1998	297,188	100,872	124,452	522,512
1999	317,640	103,020	128,692	549,352
2000	317,618	101,137	129,710	548,465
2001	309,310	43,377	106,257	458,944
2002 2003	310,771	92,557	129,511	532,839
	319,029 315,066	101,097 96,171	127,323	547,449 536,396
2004	315,066	30,171	125,159	000,000

PANYNJ one-way tolls initiated 8/12/1970.

PANYNJ toll increases May 1975, January 1984, April, 1987, April 1991, March 2001.

Note: Due to traffic restrictions arising from the events of 9/11/2001, Holland Tunnel daily volume in fall 2001 fell 57% below the fall 2000 level, and Lincoln Tunnel volume was 18% below the 2000 level.

# Hourly Vehicular Volumes Port Authority of New York & New Jersey 2004

							Totals	
	George Washington Bridge		Holland Tunnel		Lincoln Tunnel		Entering	Leaving
	E/B	W/B	E/B	W/B	E/B	W/B	Manhattan	Manhattan
12-1am	1,961	4,222	736	1,135	951	1,902	3,648	7,259
1-2am	1,361	2,538	491	1,025	629	1,151	2,481	4,714
2-3am	1,117	1,697	365	661	476	665	1,958	3,023
3-4am	1,268	1,439	337	594	506	794	2,111	2,827
4-5am	2,099	1,792	529	740	874	609	3,502	3,141
5-6am	5,557	2,817	1,843	1,152	2,480	940	9,880	4,909
6-7am	11,238 **	5,483	3,203 **	2,029	5,202 **	1,634	19,643 **	9,146
7-8am	10,726	7,874	2,968	2,722	4,946	2,322	18,640	12,918
8-9am	10,068	8,058	2,973	2,797	4,665	2,407	17,706	13,262
9-10am	9,312	6,746	2,816	2,419	4,670	2,208	16,798	11,373
10-11am	8,032	6,115	2,454	2,127	3,981	2,248	14,467	10,490
11-12am	6,803	6,033	2,084	2,091	3,416	2,326	12,303	10,450
12-1pm	6,564	6,598	1,971	2,058	3,051	2,674	11,586	11,330
1-2pm	6,740	7,302	1,977	2,401	2,892	3,009	11,609	12,712
2-3pm	7,110	9,075	2,071	2,608	2,923	3,419	12,104	15,102
3-4pm	8,049	10,805	2,335	2,833	3,089	3,691	13,473	17,329
4-5pm	9,119	12,132	2,662	2,850 **	2,602	4,283	14,383	19,265
5-6pm	9,940	12,272 **	2,847	2,764	2,093	4,393	14,880	19,429 **
6-7pm	9,616	11,403	2,758	2,834	2,417	4,619 **	14,791	18,856
7-8pm	7,667	10,734	2,508	2,769	2,672	4,290	12,847	17,793
8-9pm	5,674	9,253	2,054	2,639	2,335	3,753	10,063	15,645
9-10pm	4,943	6,928	1,908	2,519	2,074	3,329	8,925	12,776
10-11pm	4,244	6,016	1,653	2,191	2,079	3,045	7,976	11,252
11-12pm	3,210	5,316	1,263	1,407	1,803	2,622	6,276	9,345
Totals	152,418	162,648	46,806	49,365	62,826	62,333	262,050	274,346
7-10am	30,106	22,678	8,757	7,938	14,281	6,937	53,144	37,553
10am-1pm	21,399	18,746	6,509	6,276	10,448	7,248	38,356	32,270
1-4pm	21,899	27,182	6,383	7,842	8,904	10,119	37,186	45,143
4-7pm	28,675	35,807	8,267	8,448	7,112	13,295	44,054	57,550
7am-7pm	102,079	104,413	29,916	30,504	40,745	37,599	172,740	172,516