

# 2010 Manhattan River Crossings



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A member of the New York Metropolitan Transportation Council

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# Manhattan River Crossings 2010

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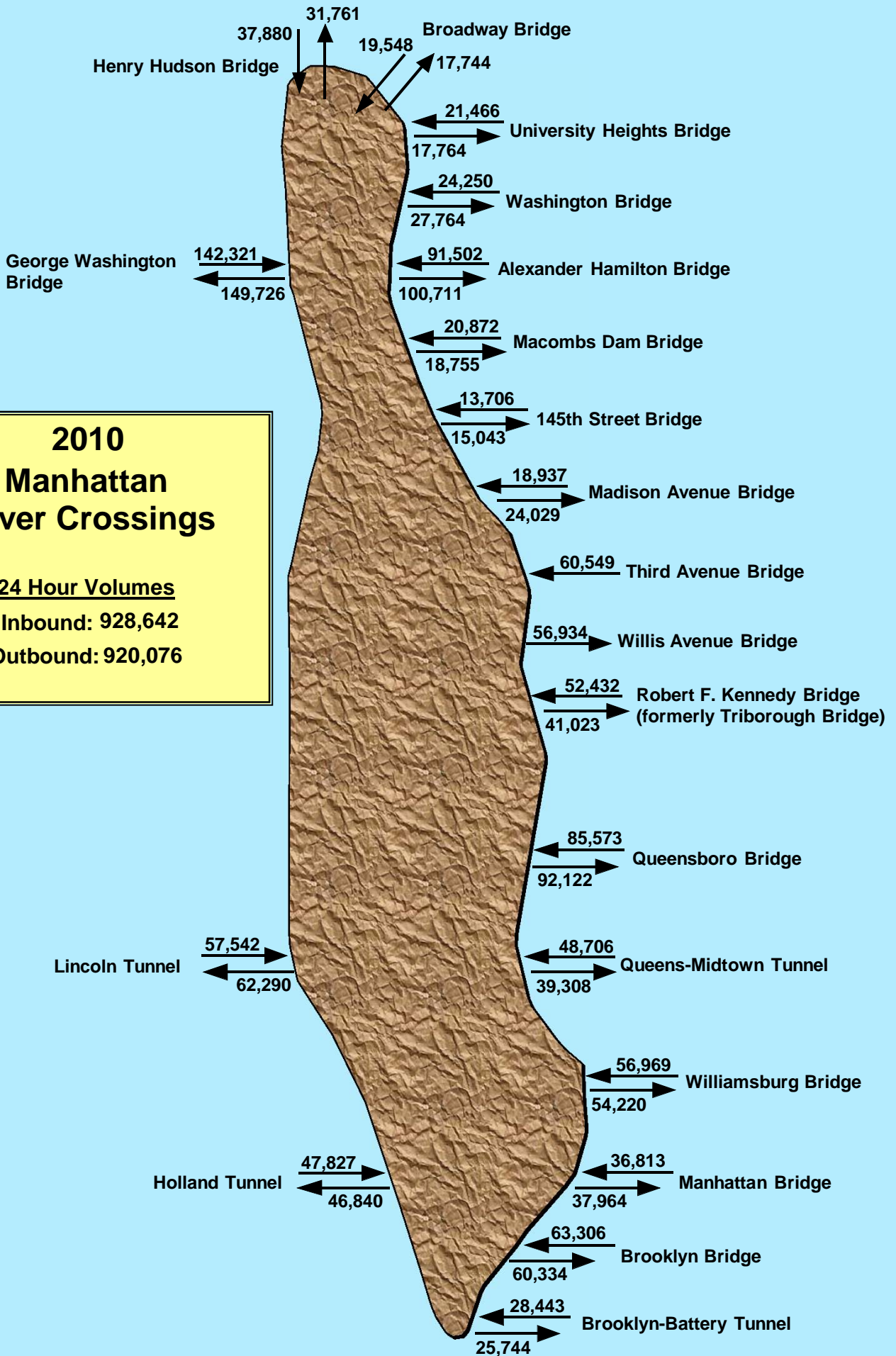
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# 2010 Manhattan River Crossings

24 Hour Volumes  
 Inbound: 928,642  
 Outbound: 920,076



**1,849,000**

daily vehicles used the 20 Manhattan River Crossings in 2010 (total of both directions).

**1.1% Increase**

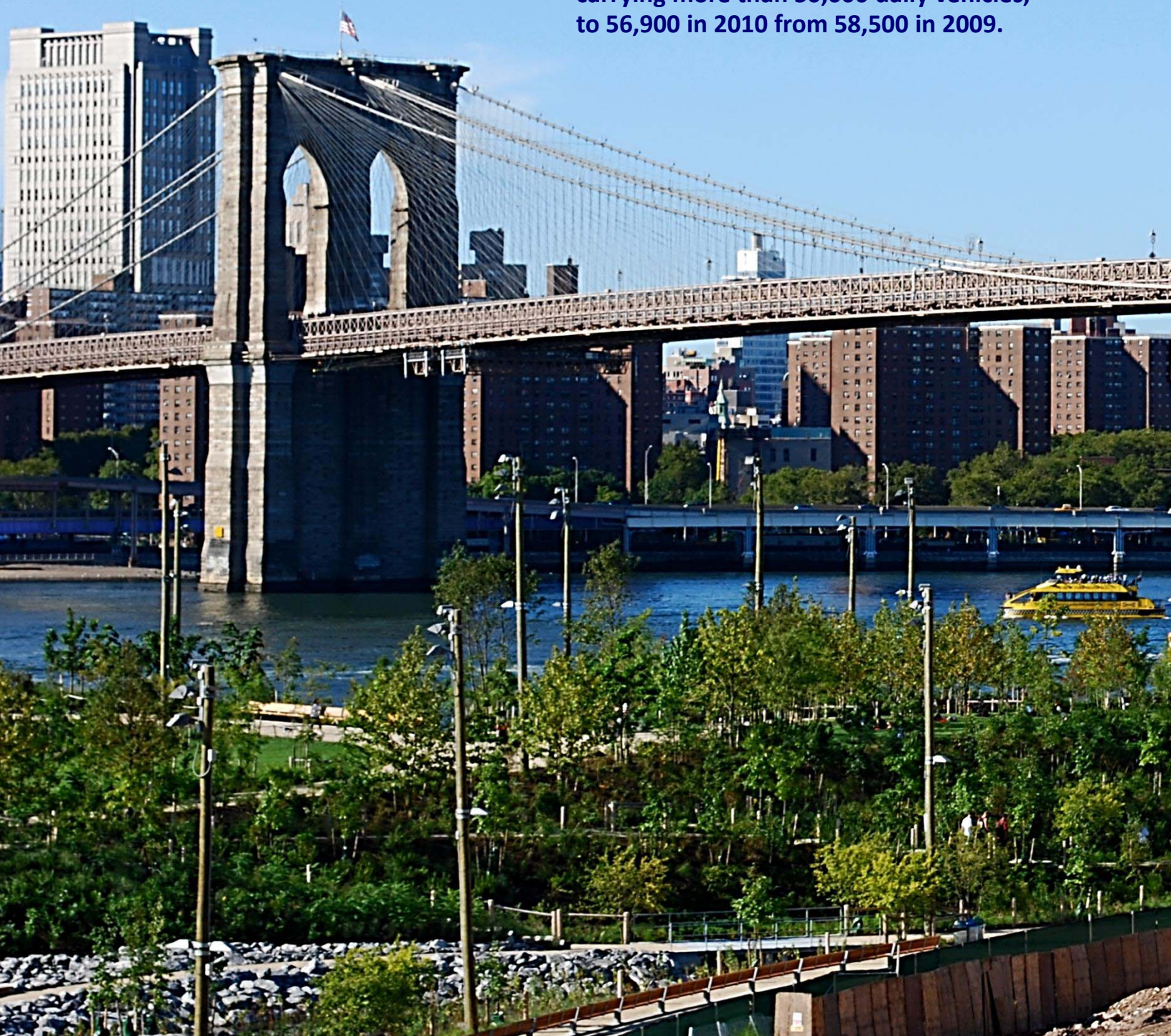
over the 1,828,000 daily vehicles recorded in 2009.

**6.9% Increase**  
**Brooklyn-Battery Tunnel**

Largest percentage increase for crossings carrying more than 50,000 daily vehicles, to 54,200 in 2010 from 50,700 in 2009.

**2.8% Decrease**  
**Willis Avenue Bridge over Harlem River**

Largest percentage decrease for crossings carrying more than 50,000 daily vehicles, to 56,900 in 2010 from 58,500 in 2009.



## **George Washington Bridge over Hudson River**

292,000 vehicles per day, the most heavily utilized Manhattan river crossing.

## **Queensboro Bridge over East River**

177,700 vehicles per day, the most heavily utilized East River crossing.

## **Alexander Hamilton Bridge over Harlem River**

192,200 vehicles per day, the most heavily utilized Harlem River crossing.

## **Annual Citywide Subway Ridership**

1.6% increase to 1.604 billion in 2010 from 1.579 billion in 2009.

During the past ten years, subway ridership increased 16.1% to 1.604 billion in 2010 from 1.381 billion in 2000. During the same period, Manhattan vehicular river crossings decreased 5.5% to 1,848,700 daily vehicles in 2010 from 1,955,500 in 2000.





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# Introduction



145th Street Bridge



## INTRODUCTION

The 2010 *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 Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy For Users (SAFETEA - LU).

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 bridges and tunnels 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 2010 are presented in histograms for each facility. The total vehicular flow to and from Manhattan has been summarized similarly with hourly histograms, and a graph of vehicle accumulation in Manhattan. The analysis presented in the report was performed by Subregional Transportation Planning Program staff of NYCDOT during the 2010-2011 and 2011-2012 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), the New York City Department of City Planning (NYCDCP), and the New York Metropolitan Transportation Council (NYMTC) for their assistance in the data collection process.

Note: NYCDOT uses the averages of vehicular volumes from selected representative weekdays. Publications from other sources may be based on alternative computation methodologies for some facilities, most notably the tolled bridges and tunnels, possibly yielding different results for those facilities.

The Harlem River and East River Bridges, as well as the MTABT and PANYNJ facilities, have been classified under a highway functional classification system. Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service each roadway provides.

The five functional classifications are defined as follows:

1. Interstate - connects population centers across state lines.
2. Principal Arterial - serves major centers of activity of an urban area and carries a high proportion of the total urban area travel on a minimum of mileage.
3. Minor Arterial - interconnects with and augments urban principal arterials; provides service for trips of moderate length at a somewhat lower level of travel mobility than principal arterials; distributes travel to geographic areas smaller than those identified with the higher system.
4. Collector Street - provides both land access service and traffic circulation within residential neighborhoods, and commercial and industrial areas. Differs from the arterial systems in that facilities on the collector system may penetrate residential neighborhoods, distributing trips from arterials to the ultimate destination.

Conversely, collector streets also collect traffic from local streets in residential neighborhoods and channel it into the arterial system.

5. Local Street - comprises all facilities not on one of the higher systems. Serves primarily to provide direct access to abutting land and access to the higher order systems. Offers the lowest level of mobility and usually contains no bus or truck routes.

# Summary ~ 2010 Daily Traffic



Macombs Dam Bridge





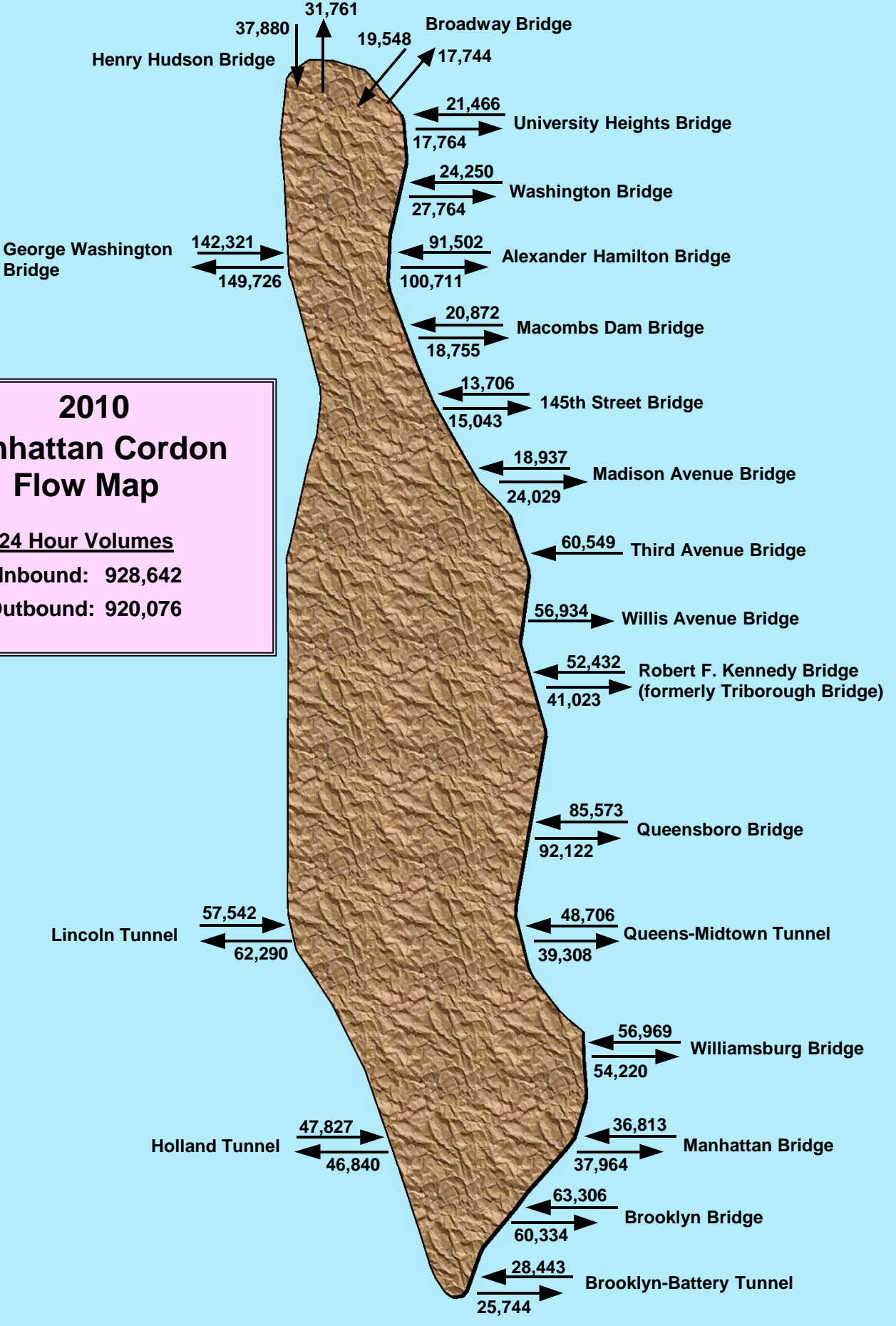
## SUMMARY

- Daily Manhattan river crossings increased 1.1%, to 1,848,700 in fall 2010 from 1,828,100 in fall 2009, an increase of 20,600 daily vehicles.
- The evening peak hour flow is less pronounced than the morning peak hour.
  - 65,400 vehicles entered Manhattan during the 7-8 am morning peak hour
  - 61,200 vehicles exited during the 4-5 pm evening peak hour.
- The busiest river crossings are the following.
  - For the 48<sup>th</sup> consecutive year, the George Washington Bridge carried more traffic than any other Manhattan river crossing. Some 292,000 daily vehicles used this bridge in fall 2010, which was 0.8% more than the average daily volume of 289,700 in fall 2009.
  - The Alexander Hamilton Bridge was second busiest, serving 192,200 daily vehicles in fall 2010, which was 0.3% more than its fall 2009 daily volume of 191,600.
  - The Queensboro Bridge was third busiest with its fall 2010 daily volume of 177,700, a decrease of 1.4% from the 180,200 recorded in fall 2009.
- The average automobile entering Manhattan during the morning peak period carried 1.38 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 1 pm when an estimated 364,700 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.
- Annual subway ridership citywide increased 1.6% to 1.604 billion in 2010 from 1.579 billion in 2009. This was the second highest level of subway ridership since 1951.
- According to census data, 45% of automobile work trips to 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 2006 at its trans-Hudson crossings show that 44% of automobiles entering Manhattan from New Jersey each day have final destinations outside Manhattan. These figures indicate that nearly 100,000 autos entering Manhattan from New Jersey in 2010 each day were simply passing through.
- Similar surveys conducted in 2009 showed that some 70% of trucks entering from New Jersey had final destinations outside Manhattan at that time. However, the Holland Tunnel was closed to all Manhattan-bound trucks during that time. It was reopened to Manhattan-bound 2-axle and 3-axle single unit trucks as of January 3, 2010. Therefore the applicability of the 2009 surveys is uncertain under the present operating conditions since diversion would have been occurring during those 2009 surveys.
- PANYNJ reports show that 66% of morning peak period (7-10 am) automobiles entering from New Jersey have final destinations in Manhattan.



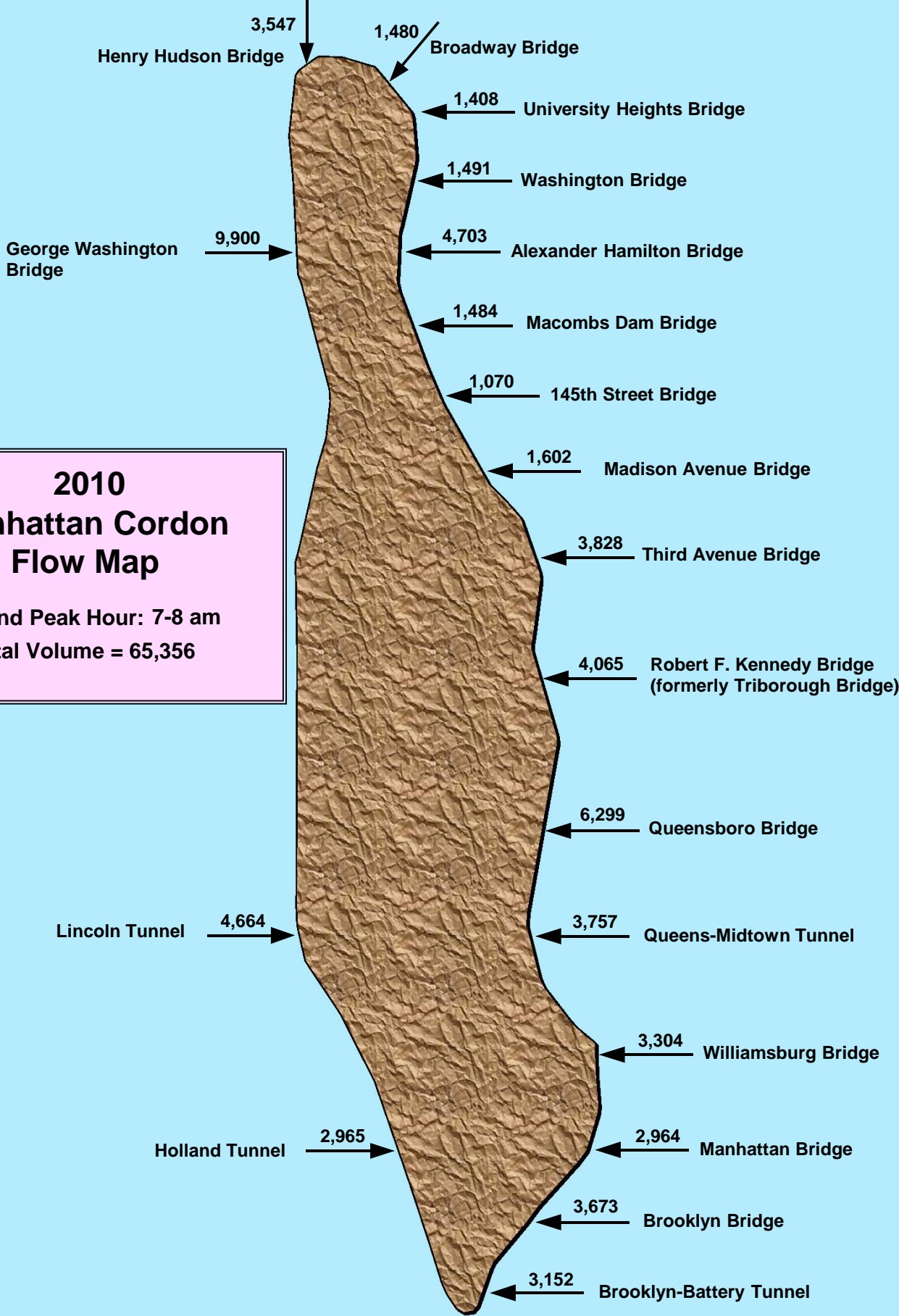
**2010  
Manhattan Cordon  
Flow Map**

24 Hour Volumes  
 Inbound: 928,642  
 Outbound: 920,076

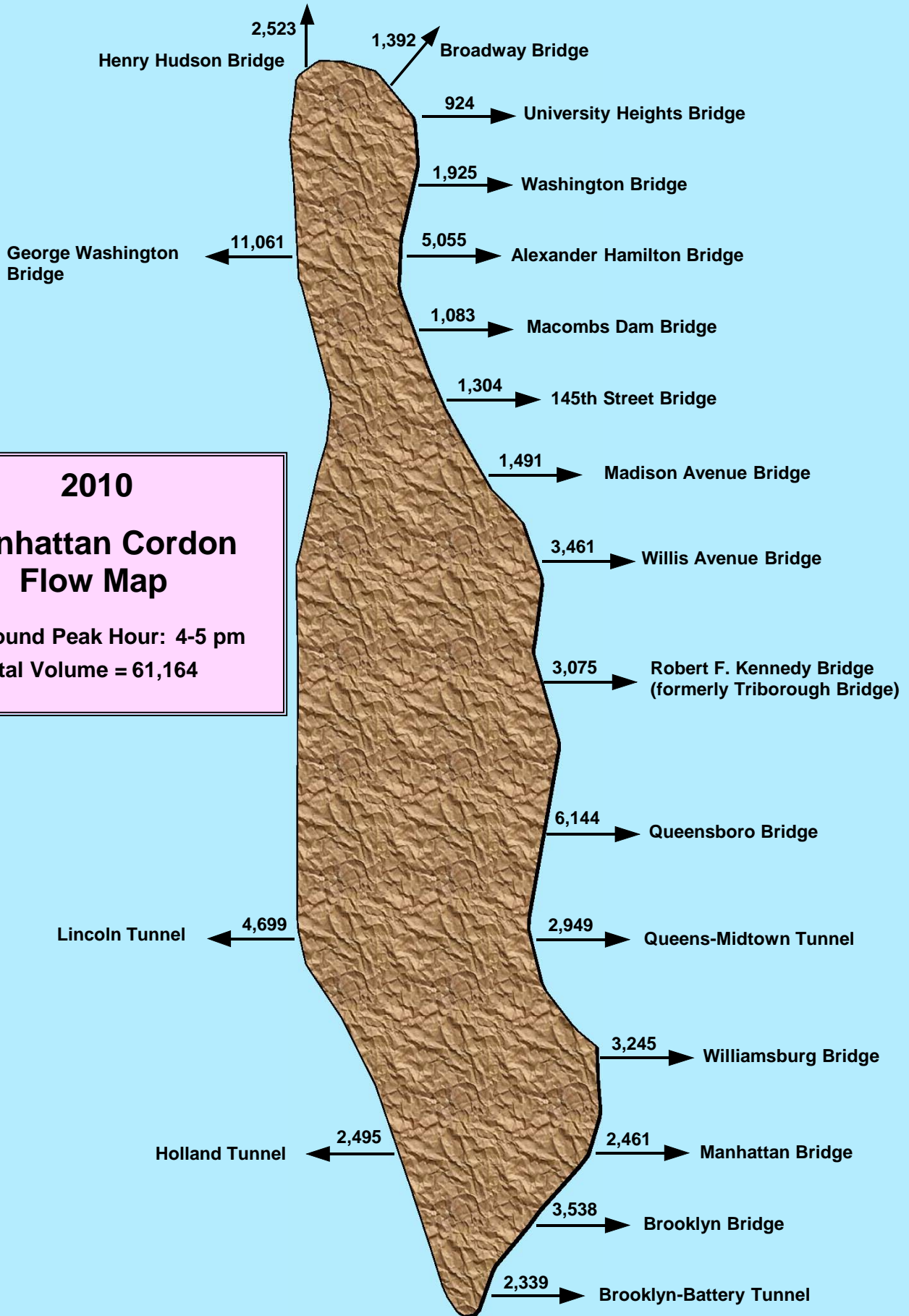


**2010  
Manhattan Cordon  
Flow Map**

Inbound Peak Hour: 7-8 am  
Total Volume = 65,356



**2010**  
**Manhattan Cordon**  
**Flow Map**  
 Outbound Peak Hour: 4-5 pm  
 Total Volume = 61,164



**Manhattan Crossings  
2010 Average Daily Traffic Volumes  
To and From Manhattan**

<b><i>EAST RIVER BRIDGES</i></b>	<b>To Manhattan</b>	<b>From Manhattan</b>	<b>2-way Total</b>
Brooklyn Bridge	63,306	60,334	123,640
Manhattan Bridge	36,813	37,964	74,777
Queensboro Bridge	85,573	92,122	177,695
Williamsburg Bridge	56,969	54,220	111,189
<b>Total East River</b>	<b>242,661</b>	<b>244,640</b>	<b>487,301</b>

<b><i>HARLEM RIVER BRIDGES</i></b>			
Alexander Hamilton Bridge	91,502	100,711	192,213
Broadway Bridge	19,548	17,744	37,292
Macombs Dam Bridge	20,872	18,755	39,627
Madison Avenue Bridge	18,937	24,029	42,966
Third Avenue Bridge	60,549	-----	60,549
University Heights Bridge	21,466	17,764	39,230
Washington Bridge	24,250	27,764	52,014
Willis Avenue Bridge	-----	56,934	56,934
145th Street Bridge	13,706	15,043	28,749
<b>Total Harlem River</b>	<b>270,830</b>	<b>278,744</b>	<b>549,574</b>

<b><i>MTABT FACILITIES</i></b>			
Brooklyn-Battery Tunnel	28,443	25,744	54,187
Henry Hudson Bridge	37,880	31,761	69,641
Queens-Midtown Tunnel	48,706	39,308	88,014
Robert F. Kennedy Bridge	52,432	41,023	93,455
<b>Total MTABT</b>	<b>167,461</b>	<b>137,836</b>	<b>305,297</b>

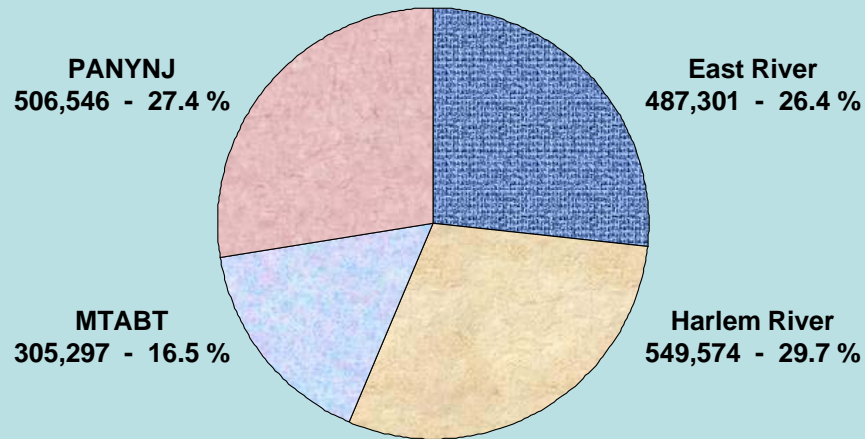
<b><i>PANYNJ FACILITIES</i></b>			
George Washington Bridge	142,321	149,726	292,047
Holland Tunnel	47,827	46,840	94,667
Lincoln Tunnel	57,542	62,290	119,832
<b>Total PANYNJ</b>	<b>247,690</b>	<b>258,856</b>	<b>506,546</b>

<b>GRAND TOTAL</b>	<b>928,642</b>	<b>920,076</b>	<b>1,848,718</b>
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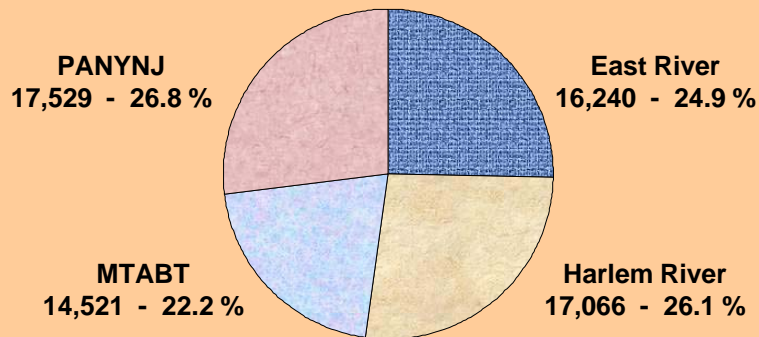
Note: Robert F. Kennedy Bridge, formerly Triborough Bridge, was renamed Nov. 19, 2008.

# 2010 Manhattan Crossings Vehicle Volumes

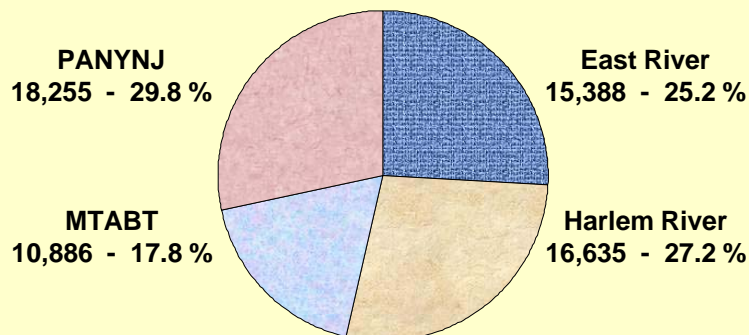
## 24-Hour Volumes – Both Directions



## A.M. Peak Hour Volumes – Inbound 7-8 am



## P.M. Peak Hour Volumes – Outbound 4-5 pm



# Total Manhattan Crossings 2010 Average Hourly Traffic Volumes To and From Manhattan (All Facilities)

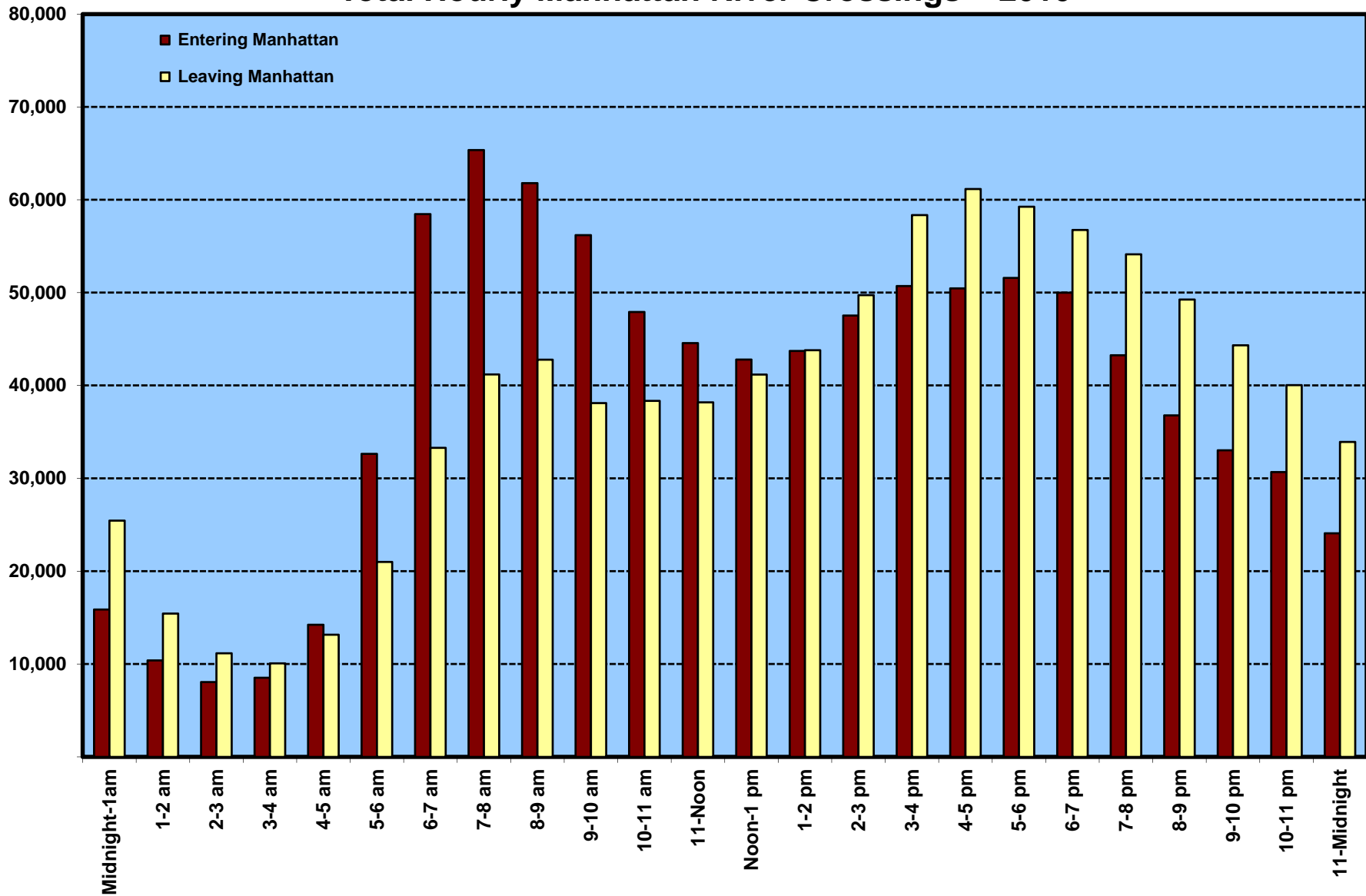
	Entering Manhattan	Leaving Manhattan	2-Way Total
12-1am	15,873	25,448	41,321
1-2am	10,391	15,443	25,834
2-3am	8,058	11,159	19,217
3-4am	8,523	10,079	18,602
4-5am	14,237	13,159	27,396
5-6am	32,644	21,001	53,645
6-7am	58,456	33,287	91,743
7-8am	65,356 **	41,198	106,554
8-9am	61,794	42,782	104,576
9-10am	56,197	38,100	94,297
10-11am	47,913	38,341	86,254
11-12am	44,570	38,191	82,761
12-1pm	42,795	41,175	83,970
1-2pm	43,726	43,797	87,523
2-3pm	47,536	49,728	97,264
3-4pm	50,715	58,346	109,061
4-5pm	50,464	61,164 **	111,628
5-6pm	51,587	59,252	110,839
6-7pm	49,995	56,747	106,742
7-8pm	43,255	54,127	97,382
8-9pm	36,788	49,254	86,042
9-10pm	33,017	44,330	77,347
10-11pm	30,674	40,042	70,716
11-12pm	24,078	33,926	58,004
24 hrs	928,642	920,076	1,848,718
7-10am	183,347	122,080	305,427
10am-1pm	135,278	117,707	252,985
1-4pm	141,977	151,871	293,848
4-7pm	152,046	177,163	329,209
7am-7pm	612,648	568,821	1,181,469

\*\* Peak Volumes

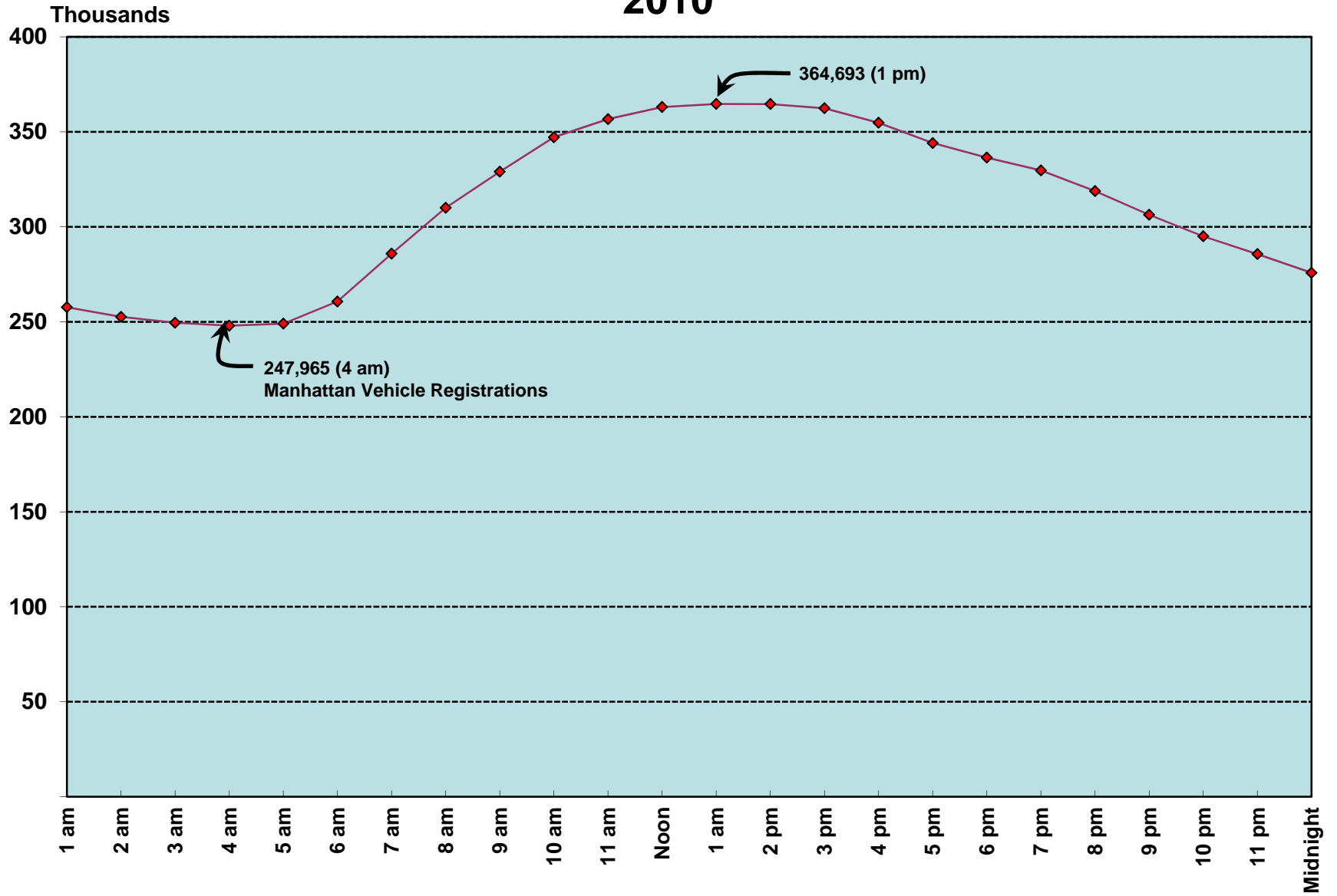


# Hourly Vehicle Volumes

## Total Hourly Manhattan River Crossings ~ 2010



# Manhattan Vehicular Accumulation 2010



# Trip Characteristics



Queensboro Bridge

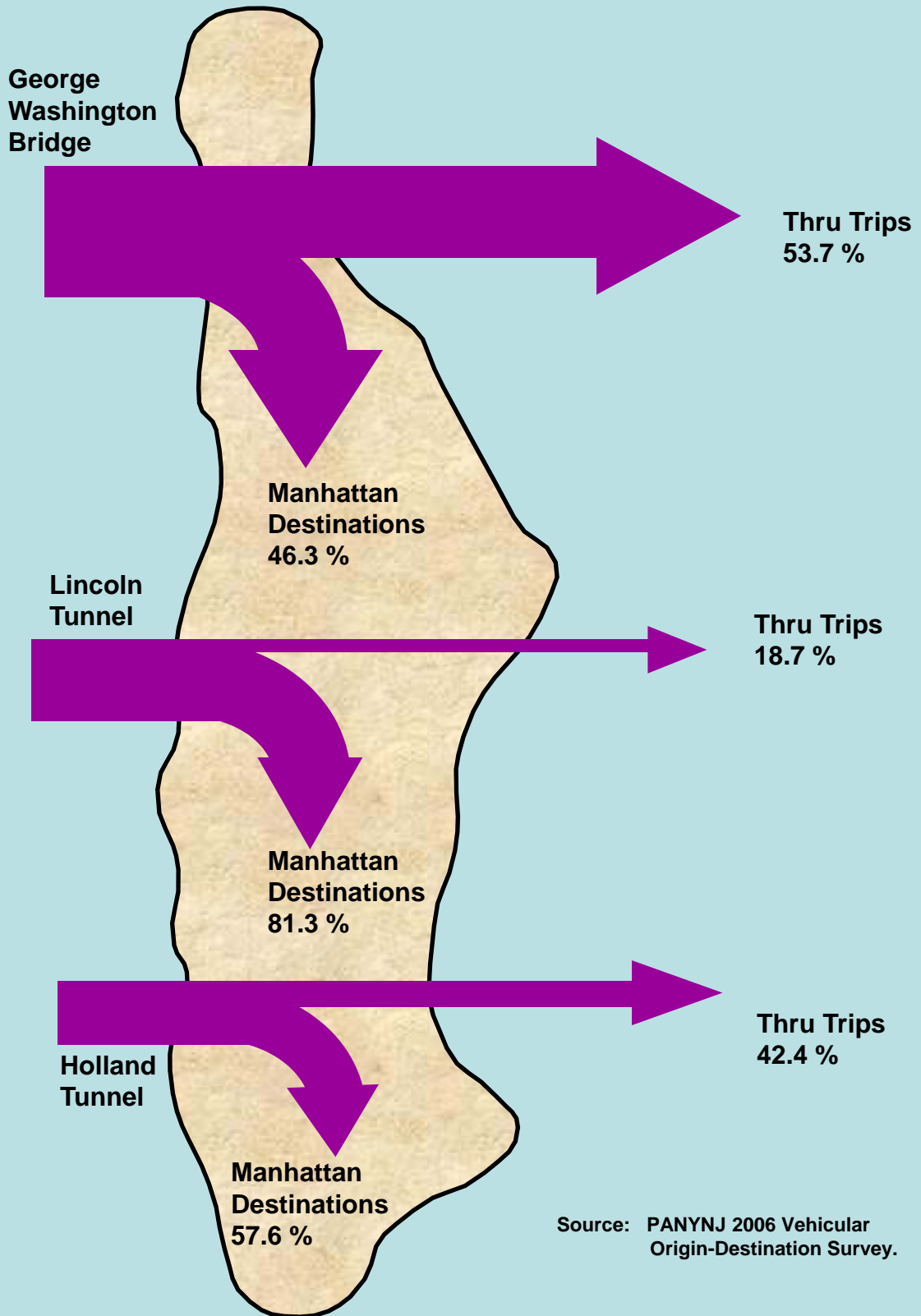
## Origins and Travel Modes of Manhattan Commuters

State & County of Residence	Total Manhattan Workers	Drove Alone	2 Person Carpool	3 Person Carpool	4+ Person Carpool	Bus	Rail Rapid Transit	Railroad	Ferry	Bicycle	Walk	Taxi	Other
NY ~ Bronx	191,715	22,815	4,245	970	530	21,335	133,375	5,425	65	270	1,375	1,080	230
NY ~ Brooklyn	387,960	25,155	5,295	1,835	930	19,635	322,275	6,500	155	2,405	2,045	800	930
NY ~ Manhattan	656,595	23,435	5,365	1,155	1,255	67,875	333,275	7,990	30	8,070	173,830	31,035	3,280
NY ~ Queens	378,360	39,800	8,980	1,735	1,285	29,305	274,565	18,710	105	360	1,385	965	1,165
NY ~ Staten Is.	56,695	10,280	1,550	425	395	31,580	4,845	830	6,360	105	185	20	120
<b>Subtotal NYC Origins</b>	<b>1,671,325</b>	<b>121,485</b>	<b>25,435</b>	<b>6,120</b>	<b>4,395</b>	<b>169,730</b>	<b>1,068,335</b>	<b>39,455</b>	<b>6,715</b>	<b>11,210</b>	<b>178,820</b>	<b>33,900</b>	<b>5,725</b>
NY ~ Nassau	95,554	18,550	3,635	550	255	2,755	9,860	59,205	60	4	305	120	255
NY ~ Westchester	83,745	17,620	3,510	515	200	3,325	7,810	49,645	140	0	300	285	395
NY ~ Suffolk	41,135	9,990	1,975	525	60	1,070	2,420	24,100	115	35	365	310	170
NY ~ Rockland	15,815	7,430	1,455	225	115	4,365	260	1,790	100	45	0	0	30
NY ~ Orange	11,595	4,955	800	190	180	2,180	445	2,780	0	0	40	25	0
NY ~ 52 Add'l Counties	16,298	5,022	1,183	89	49	753	1,801	6,367	15	98	678	60	183
<b>NY Totals ~ 62 Counties</b>	<b>1,935,467</b>	<b>185,052</b>	<b>37,993</b>	<b>8,214</b>	<b>5,254</b>	<b>184,178</b>	<b>1,090,931</b>	<b>183,342</b>	<b>7,145</b>	<b>11,392</b>	<b>180,508</b>	<b>34,700</b>	<b>6,758</b>
NJ ~ Hudson	70,020	5,930	1,295	390	235	22,155	32,840	2,540	4,000	70	310	45	210
NJ ~ Bergen	65,495	18,855	5,055	1,075	600	30,310	1,980	6,445	880	0	130	25	140
NJ ~ Essex	33,030	5,165	1,015	380	155	8,435	3,270	14,090	50	0	85	20	365
NJ ~ Middlesex	28,130	3,800	655	80	50	9,295	1,075	12,990	50	0	50	15	70
NJ ~ Monmouth	24,809	4,080	1,245	305	360	9,070	940	6,305	2,280	35	130	4	55
NJ ~ Union	17,380	3,650	715	170	160	3,295	1,730	6,840	15	0	60	0	745
NJ ~ Morris	13,064	4,200	330	95	29	2,930	525	4,760	30	0	30	0	135
NJ ~ 14 Add'l Counties	36,397	8,734	1,930	165	270	11,550	1,469	11,470	135	40	275	79	280
<b>NJ Totals ~ 21 Counties</b>	<b>288,325</b>	<b>54,414</b>	<b>12,240</b>	<b>2,660</b>	<b>1,859</b>	<b>97,040</b>	<b>43,829</b>	<b>65,440</b>	<b>7,440</b>	<b>145</b>	<b>1,070</b>	<b>188</b>	<b>2,000</b>
CT ~ Fairfield	27,965	4,095	725	15	20	740	1,725	20,365	0	0	80	20	180
CT ~ 7 Add'l Counties	5,813	1,955	314	80	30	320	585	2,240	20	0	124	75	70
<b>CT Totals ~ 8 Counties</b>	<b>33,778</b>	<b>6,050</b>	<b>1,039</b>	<b>95</b>	<b>50</b>	<b>1,060</b>	<b>2,310</b>	<b>22,605</b>	<b>20</b>	<b>0</b>	<b>204</b>	<b>95</b>	<b>250</b>
<b>PA Totals ~ 67 Counties</b>	<b>14,886</b>	<b>3,739</b>	<b>744</b>	<b>240</b>	<b>395</b>	<b>4,993</b>	<b>1,333</b>	<b>2,965</b>	<b>0</b>	<b>0</b>	<b>269</b>	<b>0</b>	<b>208</b>
<b>GRAND TOTALS</b>	<b>2,272,456</b>	<b>249,255</b>	<b>52,016</b>	<b>11,209</b>	<b>7,558</b>	<b>287,271</b>	<b>1,138,403</b>	<b>274,352</b>	<b>14,605</b>	<b>11,537</b>	<b>182,051</b>	<b>34,983</b>	<b>9,216</b>

Data Source: American Association of State Highway and Transportation Officials (AASHTO) Census Transportation Planning Products (CTTP).

AASHTO county to county flow tables based on 2006-2008 American Community Survey (ACS) data collected by the U.S. Census Bureau.

# Thru vs. Local E/B Auto Trips via Hudson River Crossings



Source: PANYNJ 2006 Vehicular Origin-Destination Survey.

## DESTINATIONS OF HUDSON RIVER CROSSINGS EASTBOUND AUTO TRAFFIC

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

<b>Eastbound Auto Destinations</b>	<b>6-7 am</b>	<b>7-10 am</b>	<b>4-7 pm</b>	<b>5 am - 11 pm</b>
Manhattan				
Manhattan CBD	42.4 %	46.2 %	24.4 %	34.5 %
Upper Manhattan	23.8 %	20.1 %	21.3 %	21.7 %
<b>Manhattan Total</b>	<b>66.2 %</b>	<b>66.3 %</b>	<b>45.7 %</b>	<b>56.2 %</b>
Bronx	12.2 %	9.6 %	10.1 %	10.8 %
Brooklyn	7.8 %	7.1 %	10.6 %	9.0 %
Queens	4.6 %	7.3 %	17.3 %	10.9 %
Westchester	4.3 %	3.2 %	7.7 %	4.7 %
Long Island	3.5 %	3.7 %	7.4 %	5.5 %
Other	1.4 %	2.8 %	1.2 %	2.9 %
<b>Thru Trip Total</b>	<b>33.8 %</b>	<b>33.7 %</b>	<b>54.3 %</b>	<b>43.8 %</b>
<b>GRAND TOTAL</b>	<b>100.0 %</b>	<b>100.0 %</b>	<b>100.0 %</b>	<b>100.0 %</b>

Source: Weekday data from the PANYNJ 2006 Vehicular Origin-Destination Survey.

## 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				
Manhattan CBD	25.5 %	26.8 %	12.3 %	18.4 %
Upper Manhattan	31.5 %	28.9 %	26.1 %	27.9 %
<b>Manhattan Total</b>	<b>57.0 %</b>	<b>55.7 %</b>	<b>38.4 %</b>	<b>46.3 %</b>
Bronx	19.5 %	16.6 %	14.5 %	17.3 %
Brooklyn	4.3 %	3.9 %	6.6 %	5.4 %
Queens	5.3 %	9.3 %	15.6 %	11.3 %
Westchester	6.9 %	4.5 %	12.3 %	7.3 %
Long Island	5.3 %	5.5 %	11.0 %	7.8 %
Other	1.7 %	4.5 %	1.6 %	4.6 %
<b>Thru Trip Total</b>	<b>43.0 %</b>	<b>44.3 %</b>	<b>61.6 %</b>	<b>53.7 %</b>
<b>GRAND TOTAL</b>	<b>100.0 %</b>	<b>100.0 %</b>	<b>100.0 %</b>	<b>100.0 %</b>

Source: Weekday data from the PANYNJ 2006 Vehicular Origin-Destination Survey.

## DESTINATIONS OF HOLLAND TUNNEL EASTBOUND AUTO TRAFFIC

Eastbound Auto Destinations	6-7 am	7-10 am	4-7 pm	5 am - 11 pm
Manhattan				
Manhattan CBD	60.6 %	62.7 %	40.3 %	49.0 %
Upper Manhattan	11.4 %	5.8 %	12.2 %	8.6 %
<b>Manhattan Total</b>	<b>72.0 %</b>	<b>68.5 %</b>	<b>52.5 %</b>	<b>57.6 %</b>
Bronx	2.1 %	0.6 %	3.2 %	2.2 %
Brooklyn	19.3 %	20.4 %	24.9 %	23.0 %
Queens	3.9 %	4.9 %	16.9 %	12.4 %
Westchester	0.6 %	3.3 %	0.0 %	2.0 %
Long Island	0.5 %	2.3 %	1.8 %	2.4 %
Other	1.6 %	0.0 %	0.7 %	0.4 %
<b>Thru Trip Total</b>	<b>28.0 %</b>	<b>31.5 %</b>	<b>47.5 %</b>	<b>42.4 %</b>
<b>GRAND TOTAL</b>	<b>100.0 %</b>	<b>100.0 %</b>	<b>100.0 %</b>	<b>100.0 %</b>

Source: Weekday data from the PANYNJ 2006 Vehicular Origin-Destination Survey.



## DESTINATIONS OF LINCOLN TUNNEL EASTBOUND AUTO TRAFFIC

Eastbound Auto Destinations	6-7 am	7-10 am	4-7 pm	5 am - 11 pm
Manhattan				
Manhattan CBD	76.7 %	78.6 %	51.6 %	64.0 %
Upper Manhattan	12.1 %	10.3 %	15.0 %	17.3 %
<b>Manhattan Total</b>	<b>88.8 %</b>	<b>88.9 %</b>	<b>66.6 %</b>	<b>81.3 %</b>
Bronx	0.0 %	0.2 %	2.7 %	1.2 %
Brooklyn	7.8 %	5.1 %	3.9 %	6.0 %
Queens	2.9 %	4.5 %	25.8 %	8.6 %
Westchester	0.0 %	0.1 %	0.0 %	0.3 %
Long Island	0.5 %	0.5 %	1.0 %	2.0 %
Other	0.0 %	0.7 %	0.0 %	0.6 %
<b>Thru Trip Total</b>	<b>11.2 %</b>	<b>11.1 %</b>	<b>33.4 %</b>	<b>18.7 %</b>
<b>GRAND TOTAL</b>	<b>100.0 %</b>	<b>100.0 %</b>	<b>100.0 %</b>	<b>100.0 %</b>

Source: Weekday data from the PANYNJ 2006 Vehicular Origin-Destination Survey.

## VEHICLE OCCUPANCY -- INBOUND TO MANHATTAN

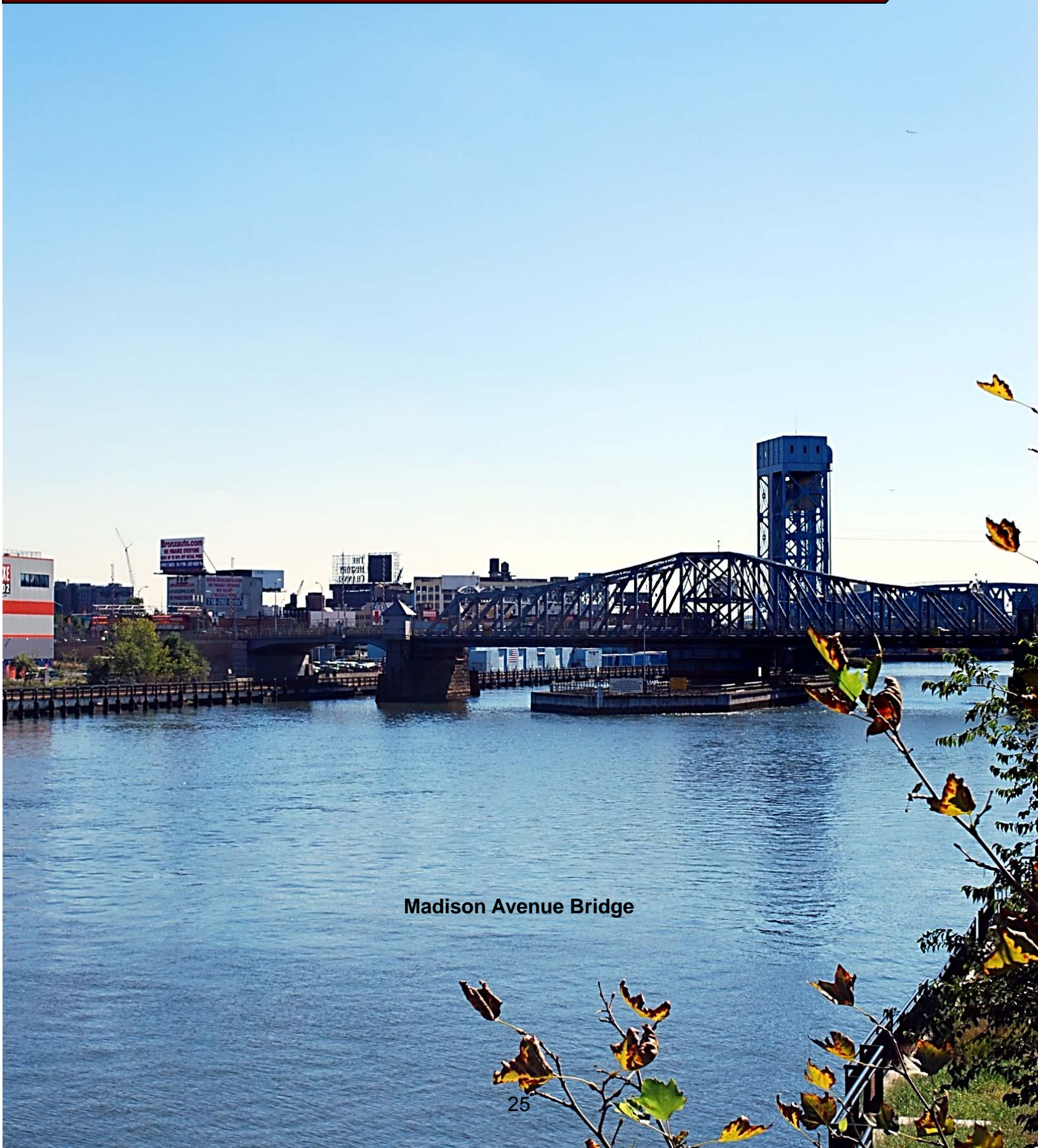
### *Average Number of Persons per Auto*

	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	80.0 %
Williamsburg Bridge	1.17	84.6 %
Holland Tunnel	1.32	65.8 %
<b>5 Lower Manhattan Crossings</b>	<b>1.25</b>	<b>76.9 %</b>
Queens-Midtown Tunnel	1.24	77.7 %
Queensboro Bridge	1.44	66.5 %
Lincoln Tunnel	1.97	73.1 %
<b>3 Midtown Manhattan Crossings</b>	<b>1.54</b>	<b>71.7 %</b>
Robert F. Kennedy Bridge	1.18	83.2 %
Alexander Hamilton Bridge	1.16	86.0 %
Broadway Bridge	1.19	84.7 %
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	1.74	79.6 %
<b>11 Upper Manhattan Crossings</b>	<b>1.38</b>	<b>81.6 %</b>
<b>All 19 Inbound Manhattan Crossings</b>	<b>1.38</b>	<b>78.2 %</b>

Sources:

1. Port Authority of New York & New Jersey: Annual Passengers per Vehicle surveys at the George Washington Bridge, Holland Tunnel, and Lincoln Tunnel.
2. New York City Department of Transportation: Fall 2005 Vehicle Occupancy surveys at all other bridges and tunnels.

# 2009-2010 Trends



**Madison Avenue Bridge**



## 2009-2010 Trends

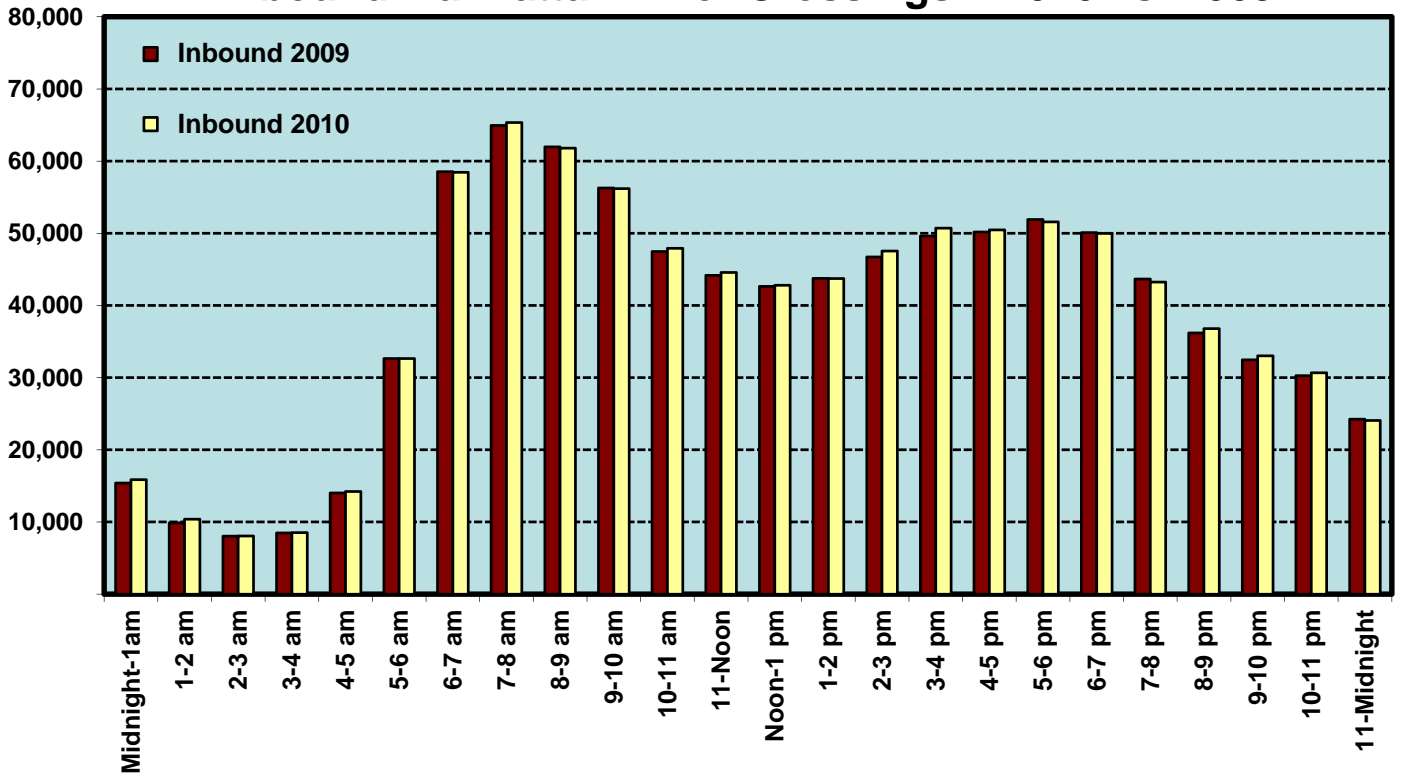
- Daily Manhattan river crossings increased 1.1%, to 1,848,700 in fall 2010 from 1,828,100 in fall 2009, an increase of 20,600 daily vehicles.
- Increases were recorded throughout most hours of the 7am – 7pm business day except for the reverse peak periods. Inbound volume between 4pm – 7pm was down 0.1% to 152,000 daily vehicles in 2010 from 152,200 in 2009. Outbound volume between 7am – 10am was down 0.7% to 122,100 in 2010 from 123,000 in 2009.
- The largest percentage and numerical increase occurred on the 145th Street Bridge over the Harlem River between Manhattan and The Bronx, where daily volume increased by 4,400 vehicles (+18.0%), to 28,800 in fall 2010 from 24,400 in fall 2009.
- The largest percentage decrease occurred on the Willis Avenue Bridge over the Harlem River between Manhattan and The Bronx, where daily traffic decreased 2.8%, to 56,900 vehicles in 2010 from 58,500 in 2009 (1,600 fewer daily vehicles).
- The largest numerical decrease was on the Queensboro Bridge over the East River between Queens and Manhattan, a decrease of 2,500 daily vehicles, to 177,700 in fall 2010 from 180,200 in fall 2009 (-1.4%).
- Daily traffic on the four East River bridges increased 0.4%, to 487,300 in fall 2010 from 485,300 in fall 2009.
- Daily volume using the nine Harlem River bridges increased 1.1%, to 549,600 in 2010 from 543,700 in 2009.
- On the four MTABT Manhattan crossings, total daily traffic increased 3.8% to 305,300 in 2010 from 294,200 in 2009.
- Daily traffic using the three PANYNJ Manhattan crossings increased 0.3% to 506,500 from 504,900.
- Annual subway ridership citywide increased 1.6% to 1.604 billion in 2010 from 1.579 billion in 2009. This was the second highest level of subway ridership since 1951.

## Manhattan Crossings Hourly Vehicular Volumes 2010 vs 2009

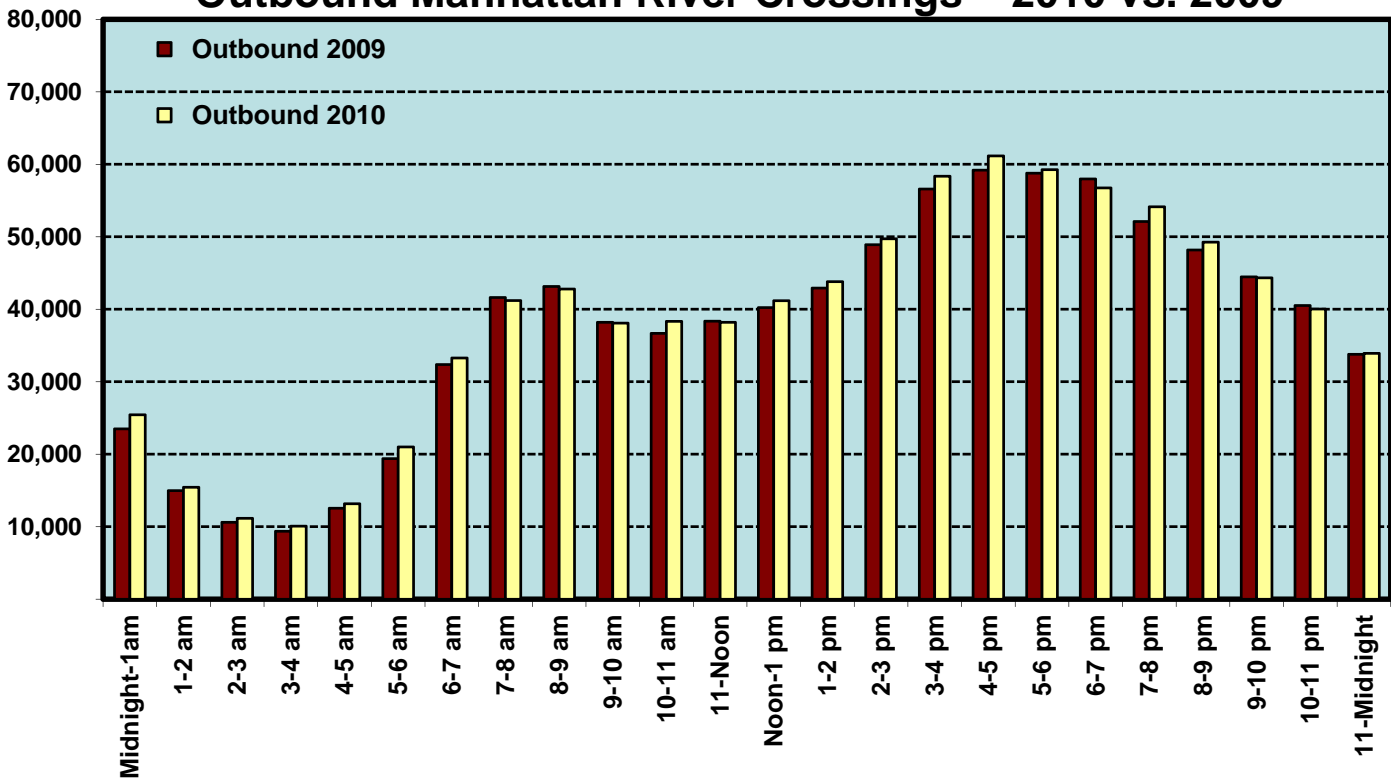
	Inbound			Outbound		
	2009	2010	Percent Change	2009	2010	Percent Change
Mid-1	15,415	15,873	3.0 %	23,501	25,448	8.3 %
1-2 am	9,895	10,391	5.0 %	14,990	15,443	3.0 %
2-3 am	8,046	8,058	0.1 %	10,600	11,159	5.3 %
3-4 am	8,482	8,523	0.5 %	9,366	10,079	7.6 %
4-5 am	14,026	14,237	1.5 %	12,544	13,159	4.9 %
5-6 am	32,655	32,644	- 0.0 %	19,392	21,001	8.3 %
6-7 am	58,547	58,456	- 0.2 %	32,372	33,287	2.8 %
7-8 am	64,940	65,356	0.6 %	41,626	41,198	- 1.0 %
8-9 am	61,974	61,794	- 0.3 %	43,151	42,782	- 0.9 %
9-10 am	56,273	56,197	- 0.1 %	38,194	38,100	- 0.2 %
10-11 a	47,470	47,913	0.9 %	36,679	38,341	4.5 %
11-Noon	44,182	44,570	0.9 %	38,349	38,191	- 0.4 %
Noon-1	42,638	42,795	0.4 %	40,239	41,175	2.3 %
1-2 pm	43,758	43,726	- 0.1 %	42,916	43,797	2.1 %
2-3 pm	46,723	47,536	1.7 %	48,899	49,728	1.7 %
3-4 pm	49,620	50,715	2.2 %	56,594	58,346	3.1 %
4-5 pm	50,181	50,464	0.6 %	59,188	61,164	3.3 %
5-6 pm	51,912	51,587	- 0.6 %	58,769	59,252	0.8 %
6-7 pm	50,097	49,995	- 0.2 %	57,970	56,747	- 2.1 %
7-8 pm	43,663	43,255	- 0.9 %	52,109	54,127	3.9 %
8-9 pm	36,195	36,788	1.6 %	48,172	49,254	2.2 %
9-10 pm	32,470	33,017	1.7 %	44,459	44,330	- 0.3 %
10-11 p	30,272	30,674	1.3 %	40,508	40,042	- 1.2 %
11-Mid	24,249	24,078	- 0.7 %	33,795	33,926	0.4 %
Totals	923,683	928,642	0.5 %	904,382	920,076	1.7 %
7-10am	183,187	183,347	0.1 %	122,971	122,080	- 0.7 %
10am-1pm	134,290	135,278	0.7 %	115,267	117,707	2.1 %
1-4pm	140,101	141,977	1.3 %	148,409	151,871	2.3 %
4-7pm	152,190	152,046	- 0.1 %	175,927	177,163	0.7 %
7am-7pm	609,768	612,648	0.5 %	562,574	568,821	1.1 %
6-10am	241,734	241,803	0.0 %	155,343	155,367	0.0 %
3-7pm	201,810	202,761	0.5 %	232,521	235,509	1.3 %
6am-7pm	668,315	671,104	0.4 %	594,946	602,108	1.2 %

# Hourly Vehicle Volumes

## Inbound Manhattan River Crossings ~ 2010 vs. 2009



## Outbound Manhattan River Crossings ~ 2010 vs. 2009



## Manhattan Crossings 2009-2010 Traffic Volume Trends Both Directions

<b>EAST RIVER BRIDGES</b>	<b>Highway Functional Classification</b>	<b>2009</b>	<b>2010</b>	<b>Percent Change</b>
Brooklyn Bridge	Principal Arterial	125,021	123,640	- 1.1 %
Manhattan Bridge	Principal Arterial	71,936	74,777	3.9 %
Queensboro Bridge	Principal Arterial	180,162	177,695	- 1.4 %
Williamsburg Bridge	Principal Arterial	108,194	111,189	2.8 %
<b>Total, 4 East River Bridges</b>		<b>485,313</b>	<b>487,301</b>	<b>0.4 %</b>
<b>HARLEM RIVER BRIDGES</b>				
Alexander Hamilton Bridge	Interstate	191,646	192,213	0.3 %
Broadway Bridge	Principal Arterial	35,566	37,292	4.9 %
Macombs Dam Bridge	Principal Arterial	39,508	39,627	0.3 %
Madison Avenue Bridge	Principal Arterial	43,480	42,966	- 1.2 %
Third Avenue Bridge	Principal Arterial	59,039	60,549	2.6 %
University Heights Bridge	Principal Arterial	39,165	39,230	0.2 %
Washington Bridge	Minor Arterial	52,420	52,014	- 0.8 %
Willis Avenue Bridge	Principal Arterial	58,548	56,934	- 2.8 %
145th Street Bridge	Minor Arterial	24,364	28,749	18.0 %
<b>Total, 9 Harlem River Bridges</b>		<b>543,736</b>	<b>549,574</b>	<b>1.1 %</b>
<b>MTABT Manhattan Facilities</b>				
Brooklyn-Battery Tunnel	Interstate	50,674	54,187	6.9 %
Henry Hudson Bridge	Principal Arterial	66,607	69,641	4.6 %
Queens-Midtown Tunnel	Interstate	85,144	88,014	3.4 %
R.F.K. Memorial Bridge Manhattan Plaza *	Principal Arterial	91,731	93,455	1.9 %
<b>Total, 4 MTABT Manhattan Crossings</b>		<b>294,156</b>	<b>305,297</b>	<b>3.8 %</b>
<b>PANYNJ Manhattan Facilities</b>				
George Washington Bridge	Interstate	289,694	292,047	0.8 %
Holland Tunnel	Interstate	96,184	94,667	- 1.6 %
Lincoln Tunnel	Principal Arterial	118,982	119,832	0.7 %
<b>Total, 3 PANYNJ Manhattan - New Jersey Crossings</b>		<b>504,860</b>	<b>506,546</b>	<b>0.3 %</b>
<b>GRAND TOTALS</b>		<b>1,828,065</b>	<b>1,848,718</b>	<b>1.1 %</b>

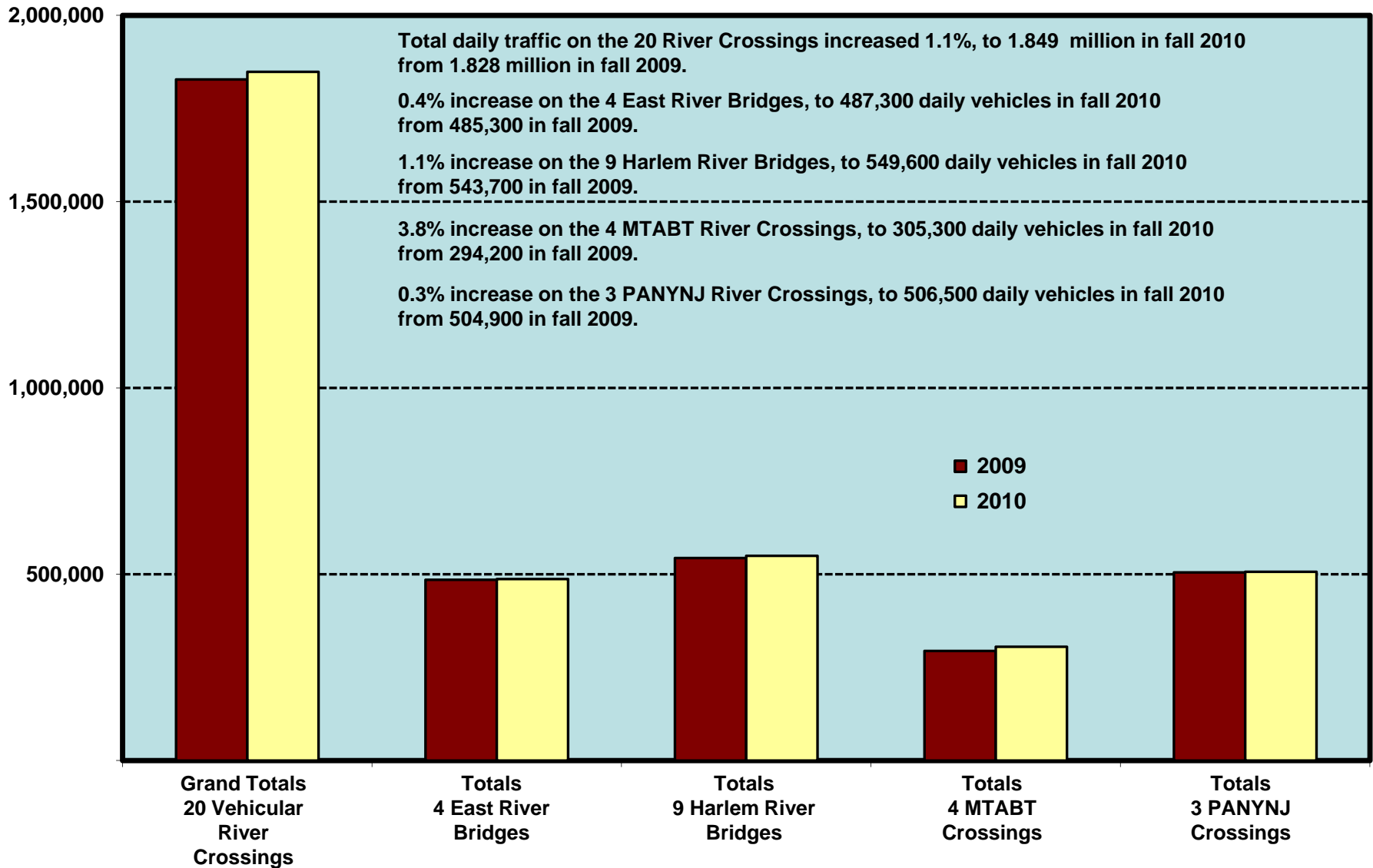
\* Formerly Triborough Bridge.



# Manhattan River Crossings Daily Volumes

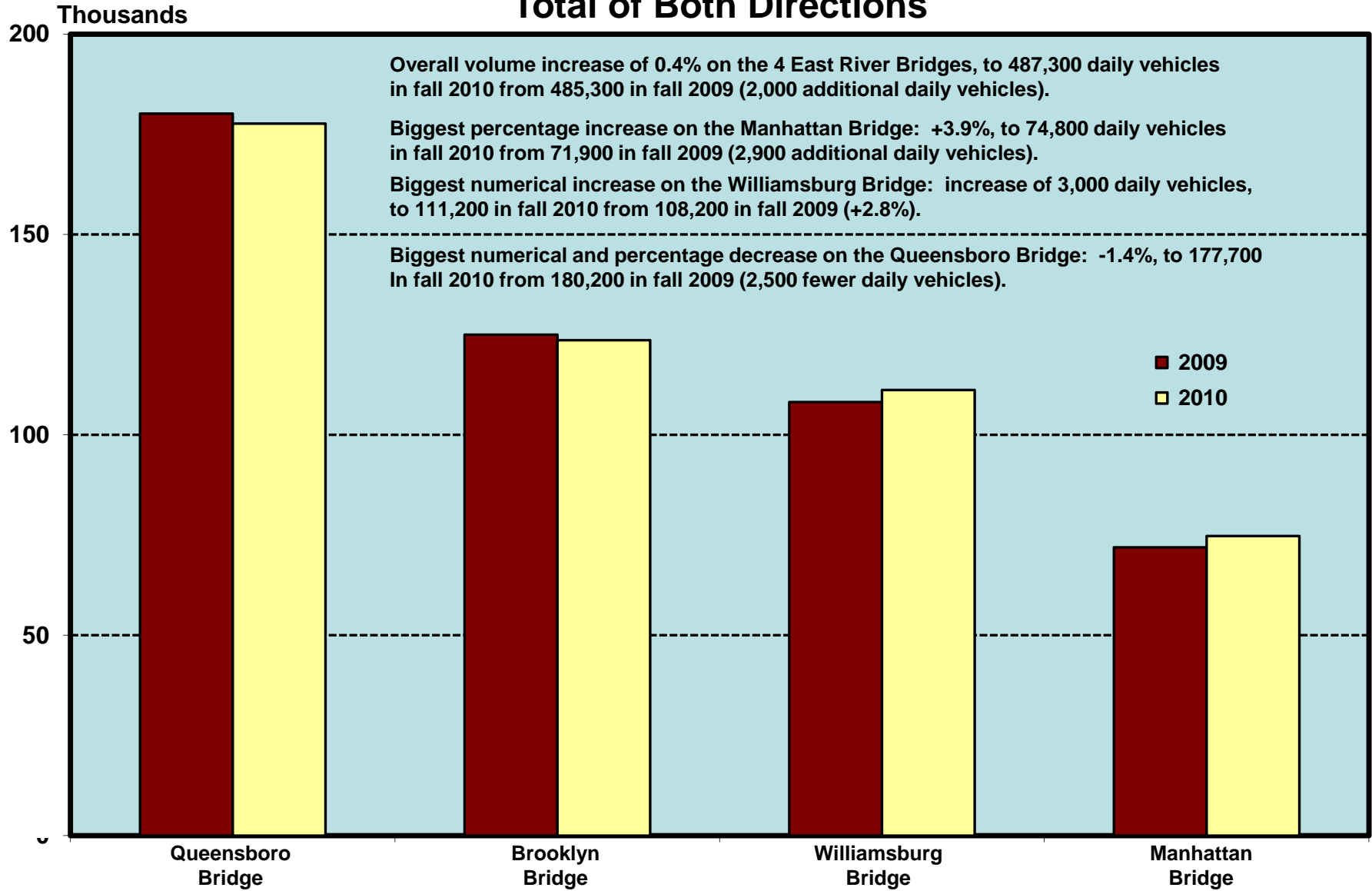
## 2010 vs. 2009

### Total of Both Directions



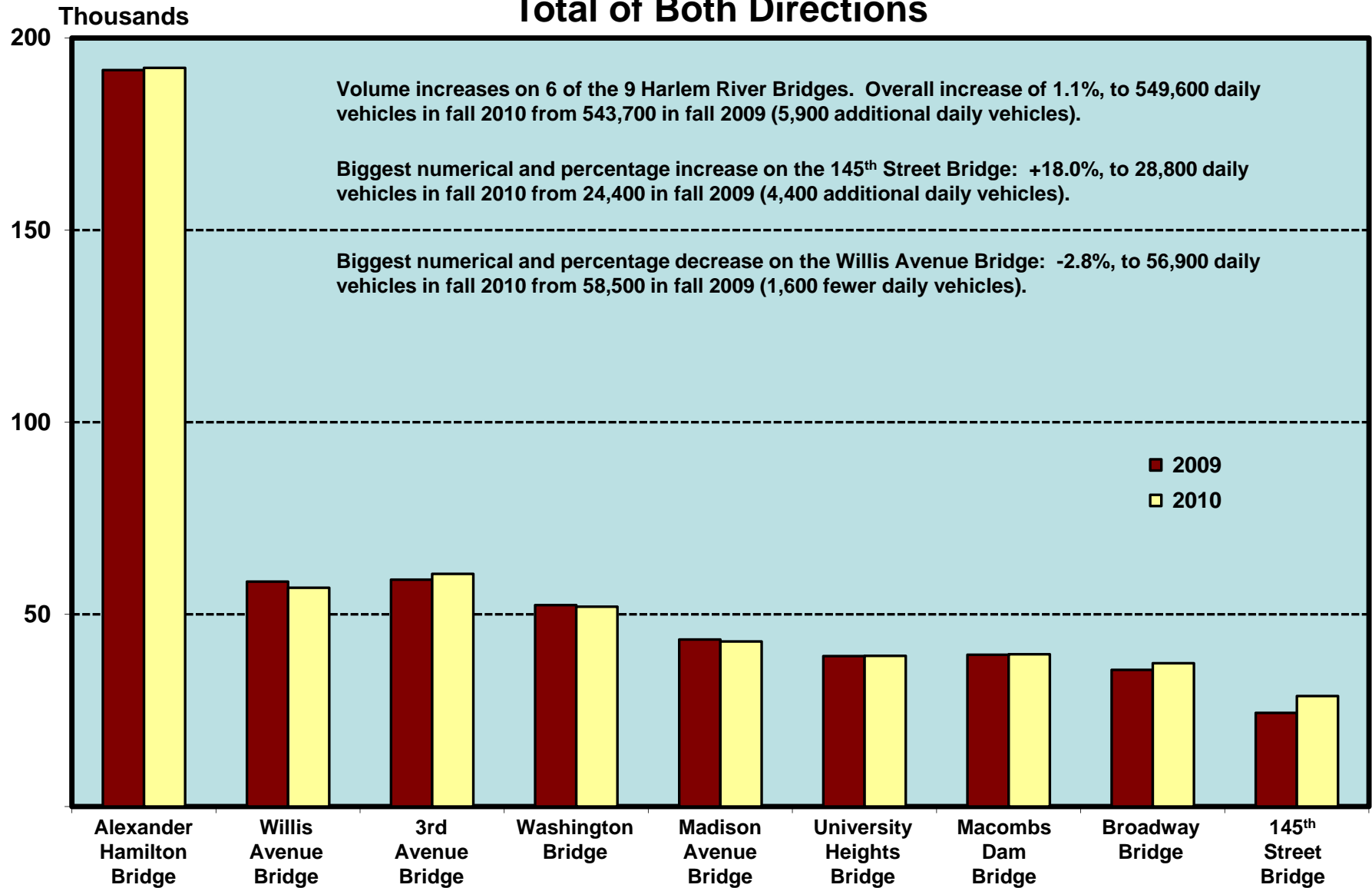
# East River Bridges Daily Volumes 2010 vs. 2009

## Total of Both Directions



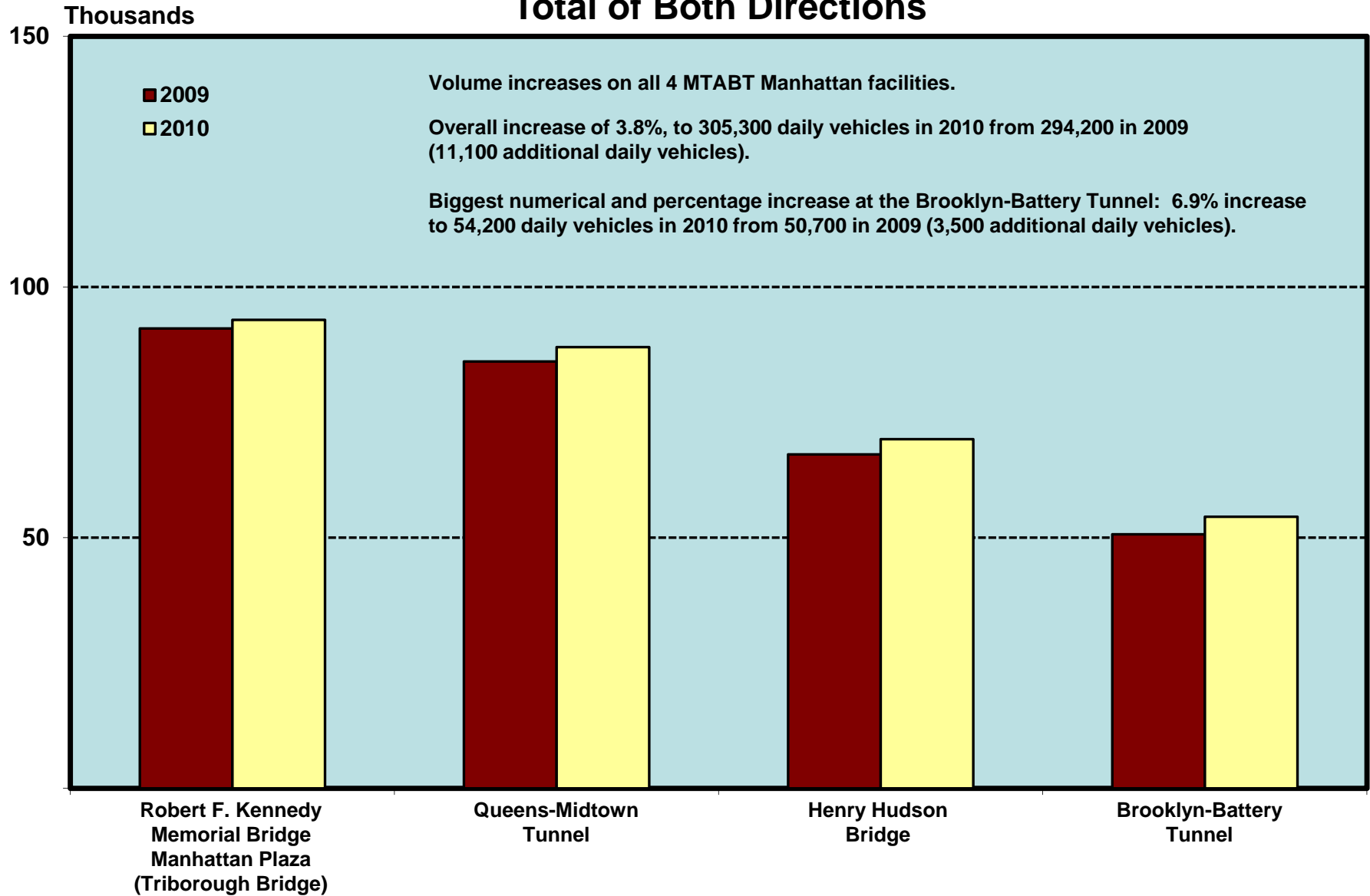
# Harlem River Bridges Daily Volumes 2010 vs. 2009

## Total of Both Directions



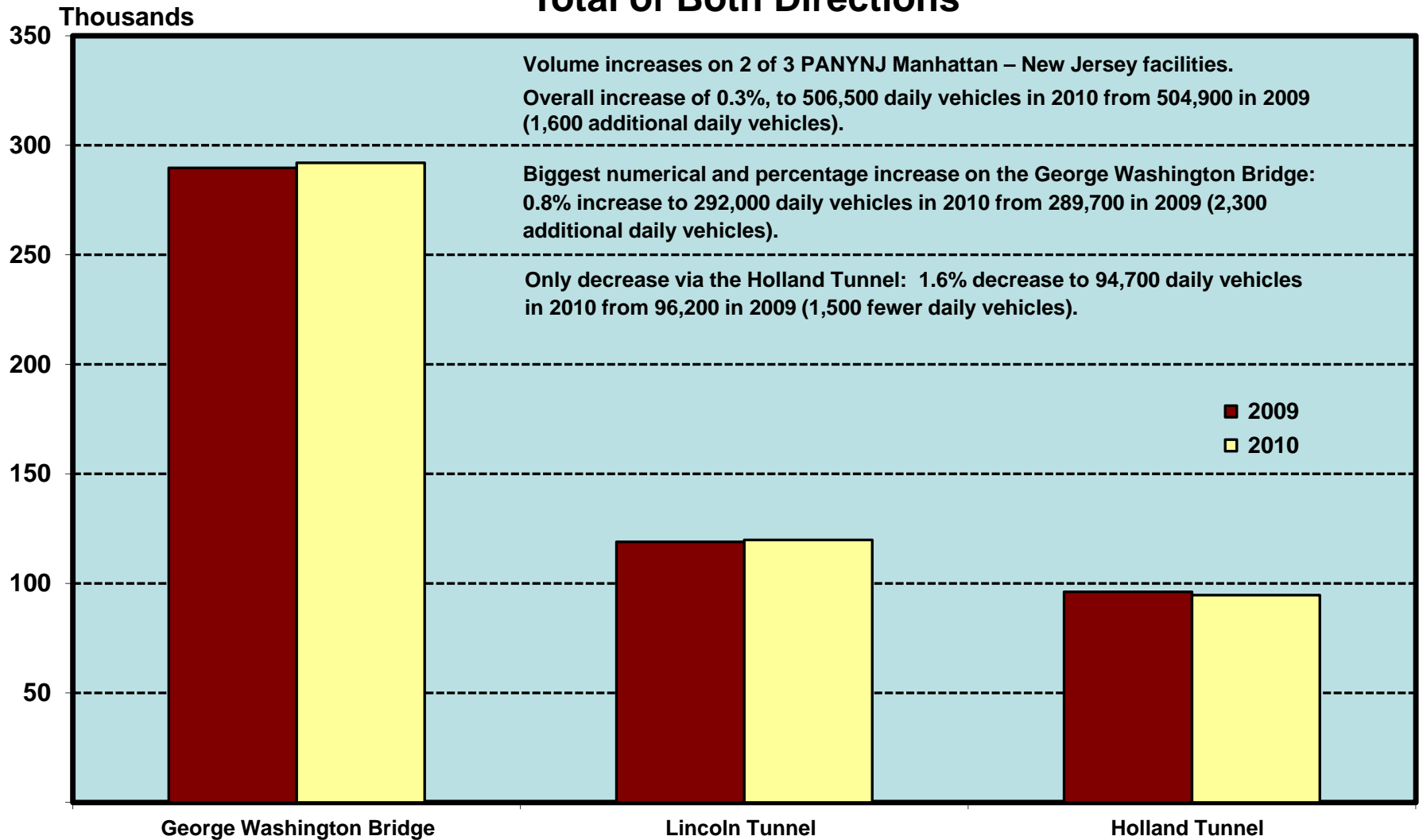
# Metropolitan Transportation Authority Bridges & Tunnels (MTABT) Manhattan Facilities Daily Volumes 2010 vs. 2009

## Total of Both Directions



# Port Authority of New York & New Jersey (PANYNJ) Manhattan – N.J. Facilities Daily Volumes 2010 vs. 2009

## Total of Both Directions





# Ten-Year Trends 2000 - 2010



**Williamsburg Bridge**





## Ten-Year Trends: 2000 - 2010

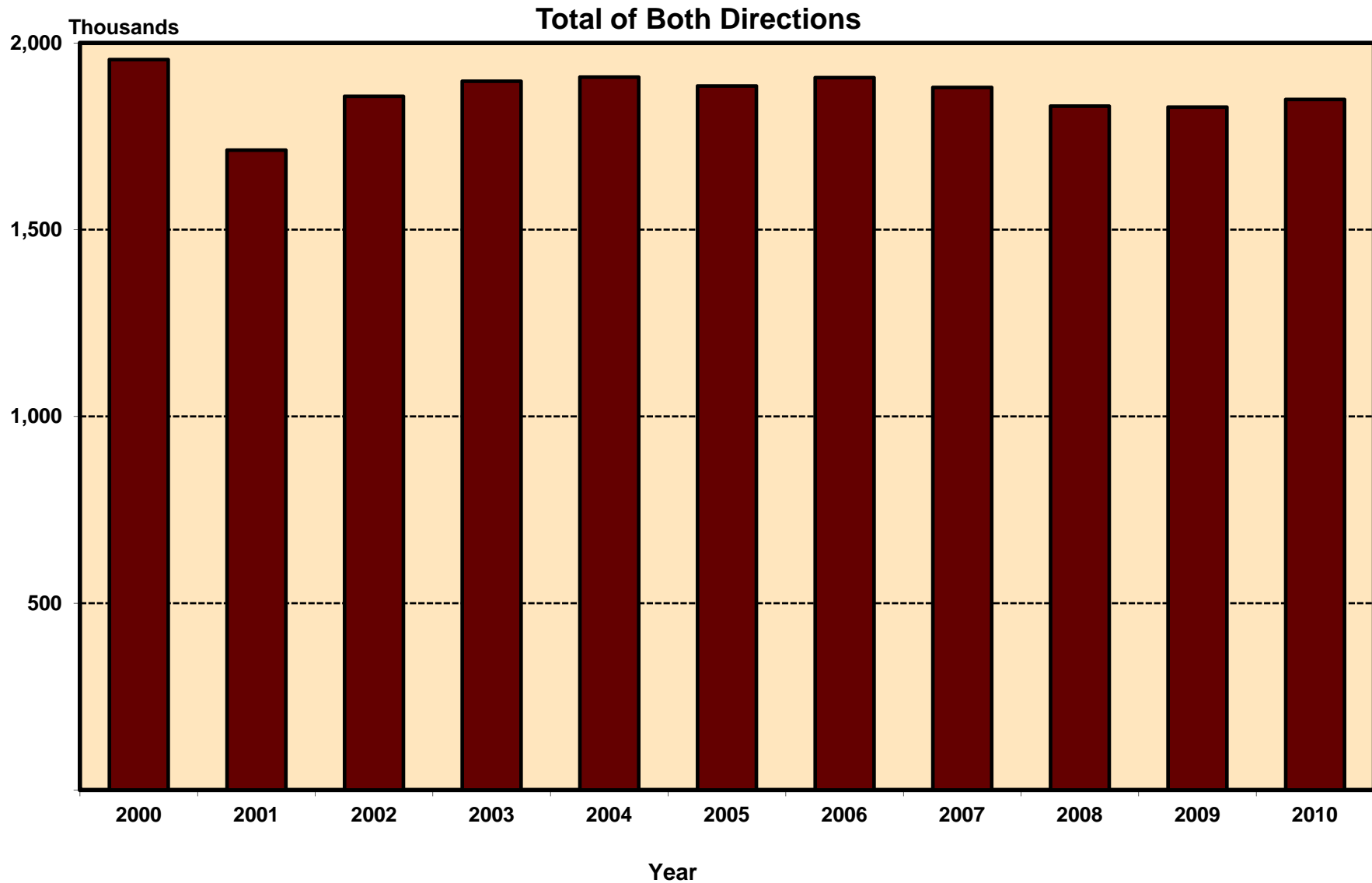
- In the ten-year period from 2000 to 2010, Manhattan river crossings traffic volume decreased 5.5%, to 1,848,700 daily vehicles from 1,955,500, a decrease of 106,800 daily vehicles.
- Daily vehicle trips entering Manhattan were 5.1% lower in 2010 than in 2000. The biggest percentage and numerical decrease in inbound trips occurred during the 7-10am period, which decreased 10.1% during the decade (20,600 fewer daily entries). Trips leaving Manhattan decreased 5.8% since 2000. The biggest percentage and numerical outbound decrease occurred during the 4-7pm period (-11.5%, or 22,900 fewer daily vehicles).
- Vehicle trips on the 13 toll-free East and Harlem River bridges decreased 5.2%, to 1,036,900 daily vehicles in 2010 from 1,093,500 in 2000.
  - Greatest percentage decrease on the Washington Bridge over the Harlem River (down 23.6%, to 52,000 daily vehicles in 2010 from 68,100 in 2000).
  - Greatest volume decrease on the Brooklyn Bridge, a loss of 24,100 daily trips, to 123,600 in 2010 from 147,700 in 2000 (-16.3%).
  - Greatest percentage and numerical increase on the Macombs Dam Bridge: up 88.6% to 39,600 daily vehicles in 2010 from 21,000 in 2000 (18,600 additional daily vehicles). Capacity on the Macombs Dam Bridge had been reduced in 2000 due to reconstruction.
- Traffic volumes on the four MTA Bridges and Tunnels (MTABT) river crossings serving Manhattan decreased 2.6%, to 305,300 daily vehicles in 2010 from 313,500 in 2000.
  - Greatest percentage decrease at the Brooklyn-Battery Tunnel: 14.3% decrease, to 54,200 daily vehicles in 2010 from 63,200 in 2000 (9,000 fewer daily vehicles).
  - Biggest numerical decrease at the Manhattan Plaza of Robert F. Kennedy Memorial Bridge: decrease of 9,600 daily vehicles, to 93,500 in 2010 from 103,100 in 2000 (-9.3%).
  - Greatest numerical and percentage increase at Queens-Midtown Tunnel: up 8.8% to 88,000 daily vehicles in 2010 from 80,900 in 2000 (7,100 additional daily vehicles).
- Traffic volumes on the three trans-Hudson Port Authority of New York and New Jersey (PANYNJ) river crossings serving Manhattan decreased 7.6%, to 506,500 daily vehicles in 2010 from 548,500 in 2000.
  - Decreases recorded on all three facilities.
  - Greatest percentage and numerical decrease on George Washington Bridge: -8.1%, to 292,000 daily vehicles in 2010 from 317,600 in 2000 (25,600 fewer vehicles per day).
- New York City motor vehicle registrations decreased 4.0% to 1,962,200 in 2010 from 2,044,400 in 2000. Manhattan registrations decreased 3.1% to 248,000 from 255,800.
- Annual citywide subway ridership increased 16.1% to 1,604,000,000 in 2010 from 1,381,000,000 in 2000, and is now at its second highest level of the past half century.

## Manhattan Crossings 10-Year Traffic Volume Trends ~ 2000-2010 Both Directions

<b>EAST RIVER BRIDGES</b>	<b>Highway Functional Classification</b>	<b>2000</b>	<b>2010</b>	<b>Percent Change</b>
Brooklyn Bridge	Principal Arterial	147,767	123,640	- 16.3 %
Manhattan Bridge	Principal Arterial	75,684	74,777	- 1.2 %
Queensboro Bridge	Principal Arterial	182,940	177,695	- 2.9 %
Williamsburg Bridge	Principal Arterial	108,376	111,189	2.6 %
<b>Total, 4 East River Bridges</b>		<b>514,767</b>	<b>487,301</b>	<b>- 5.3 %</b>
<b>HARLEM RIVER BRIDGES</b>				
Alexander Hamilton Bridge	Interstate	177,899	192,213	8.0 %
Broadway Bridge	Principal Arterial	37,990	37,292	- 1.8 %
Macombs Dam Bridge	Principal Arterial	21,008	39,627	88.6 %
Madison Avenue Bridge	Principal Arterial	47,583	42,966	- 9.7 %
Third Avenue Bridge	Principal Arterial	73,121	60,549	- 17.2 %
University Heights Bridge	Principal Arterial	45,557	39,230	- 13.9 %
Washington Bridge	Minor Arterial	68,075	52,014	- 23.6 %
Willis Avenue Bridge	Principal Arterial	73,175	56,934	- 22.2 %
145th Street Bridge	Minor Arterial	34,362	28,749	- 16.3 %
<b>Total, 9 Harlem River Bridges</b>		<b>578,770</b>	<b>549,574</b>	<b>- 5.0 %</b>
<b>MTABT Manhattan Facilities</b>				
Brooklyn-Battery Tunnel	Interstate	63,242	54,187	- 14.3 %
Henry Hudson Bridge	Principal Arterial	66,304	69,641	5.0 %
Queens-Midtown Tunnel	Interstate	80,879	88,014	8.8 %
R.F.K. Memorial Bridge Manhattan Plaza *	Principal Arterial	103,079	93,455	- 9.3 %
<b>Total, 4 MTABT Manhattan Crossings</b>		<b>313,504</b>	<b>305,297</b>	<b>- 2.6 %</b>
<b>PANYNJ Manhattan Facilities</b>				
George Washington Bridge	Interstate	317,618	292,047	- 8.1 %
Holland Tunnel	Interstate	101,137	94,667	- 6.4 %
Lincoln Tunnel	Principal Arterial	129,710	119,832	- 7.6 %
<b>Total, 3 PANYNJ Manhattan - New Jersey Crossings</b>		<b>548,465</b>	<b>506,546</b>	<b>- 7.6 %</b>
<b>GRAND TOTALS</b>		<b>1,955,506</b>	<b>1,848,718</b>	<b>- 5.5 %</b>

\* Formerly Triborough Bridge.

# Daily Manhattan River Crossings 2000 - 2010

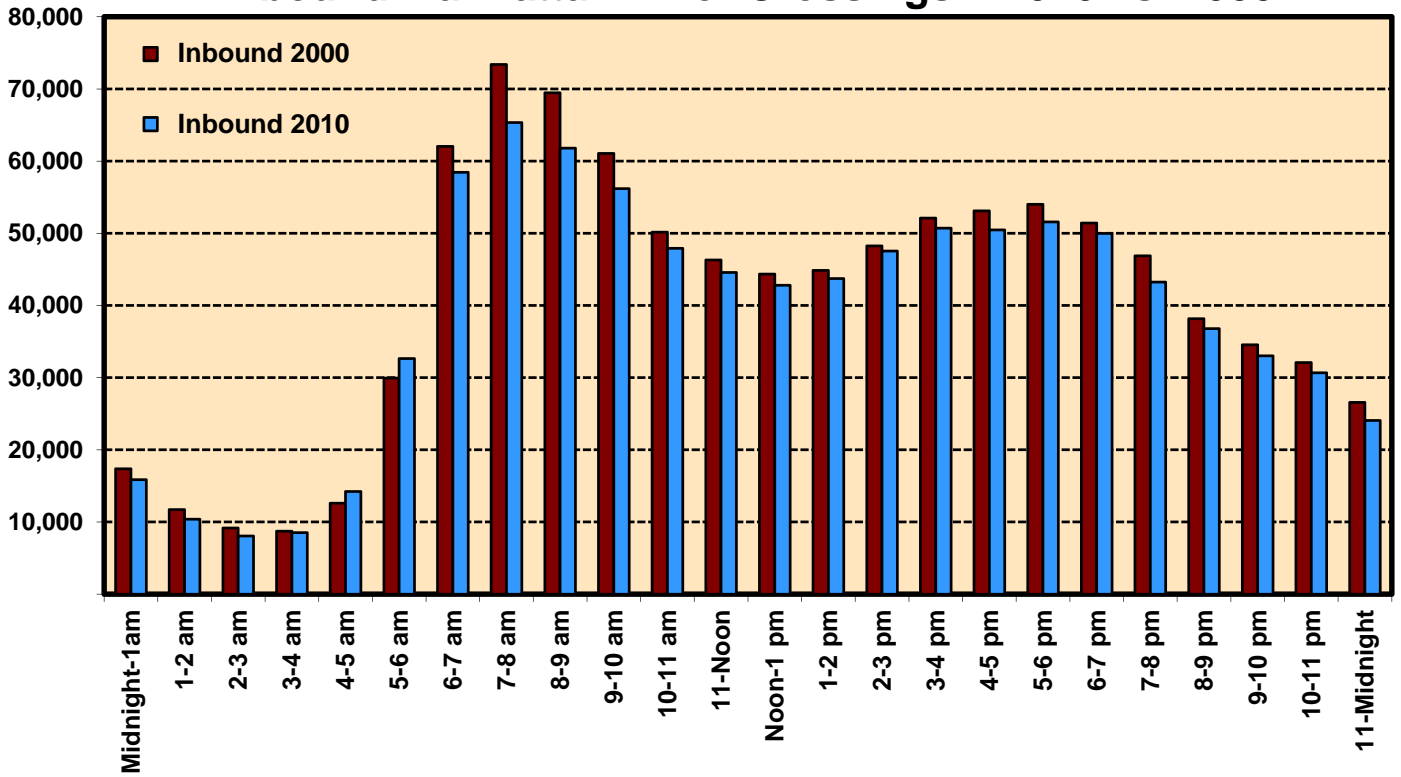


## Manhattan River Crossings Hourly Vehicular Volumes 2000 vs 2010

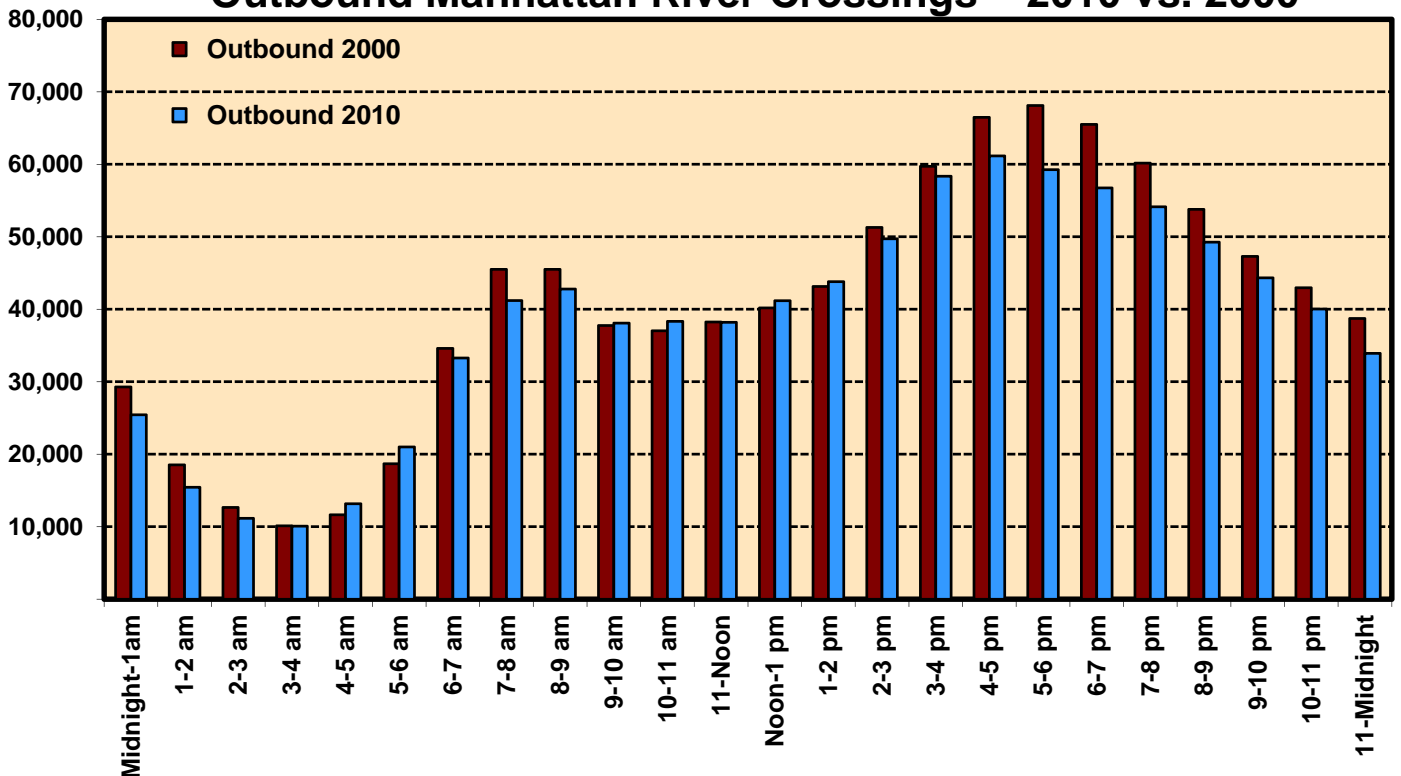
	Inbound			Outbound		
	2000	2010	Percent Change	2000	2010	Percent Change
Mid-1	17,383	15,873	- 8.7 %	29,283	25,448	-13.1 %
1-2 am	11,715	10,391	-11.3 %	18,538	15,443	-16.7 %
2-3 am	9,186	8,058	-12.3 %	12,669	11,159	-11.9 %
3-4 am	8,730	8,523	- 2.4 %	10,123	10,079	- 0.4 %
4-5 am	12,617	14,237	12.8 %	11,646	13,159	13.0 %
5-6 am	29,954	32,644	9.0 %	18,698	21,001	12.3 %
6-7 am	62,051	58,456	- 5.8 %	34,612	33,287	- 3.8 %
7-8 am	73,400	65,356	-11.0 %	45,498	41,198	- 9.5 %
8-9 am	69,476	61,794	-11.1 %	45,512	42,782	- 6.0 %
9-10 am	61,064	56,197	- 8.0 %	37,759	38,100	0.9 %
10-11 a	50,166	47,913	- 4.5 %	37,037	38,341	3.5 %
11-Noon	46,298	44,570	- 3.7 %	38,249	38,191	- 0.2 %
Noon-1	44,362	42,795	- 3.5 %	40,177	41,175	2.5 %
1-2 pm	44,858	43,726	- 2.5 %	43,146	43,797	1.5 %
2-3 pm	48,250	47,536	- 1.5 %	51,300	49,728	- 3.1 %
3-4 pm	52,113	50,715	- 2.7 %	59,728	58,346	- 2.3 %
4-5 pm	53,112	50,464	- 5.0 %	66,468	61,164	- 8.0 %
5-6 pm	54,025	51,587	- 4.5 %	68,112	59,252	-13.0 %
6-7 pm	51,424	49,995	- 2.8 %	65,511	56,747	-13.4 %
7-8 pm	46,878	43,255	- 7.7 %	60,172	54,127	-10.0 %
8-9 pm	38,181	36,788	- 3.6 %	53,783	49,254	- 8.4 %
9-10 pm	34,551	33,017	- 4.4 %	47,301	44,330	- 6.3 %
10-11 p	32,107	30,674	- 4.5 %	42,971	40,042	- 6.8 %
11-Mid	26,586	24,078	- 9.4 %	38,726	33,926	-12.4 %
Totals	978,487	928,642	- 5.1 %	977,019	920,076	- 5.8 %
1-4am	29,631	26,972	- 9.0 %	41,330	36,681	-11.2 %
4-7am	104,622	105,337	0.7 %	64,956	67,447	3.8 %
7-10am	203,940	183,347	-10.1 %	128,769	122,080	- 5.2 %
10am-1pm	140,826	135,278	- 3.9 %	115,463	117,707	1.9 %
1-4pm	145,221	141,977	- 2.2 %	154,174	151,871	- 1.5 %
4-7pm	158,561	152,046	- 4.1 %	200,091	177,163	-11.5 %
7-10pm	119,610	113,060	- 5.5 %	161,256	147,711	- 8.4 %
10pm-1am	76,076	70,625	- 7.2 %	110,980	99,416	-10.4 %
7am-7pm	648,548	612,648	- 5.5 %	598,497	568,821	- 5.0 %
6-10am	265,991	241,803	- 9.1 %	163,381	155,367	- 4.9 %
3-7pm	210,674	202,761	- 3.8 %	259,819	235,509	- 9.4 %
6am-7pm	710,599	671,104	- 5.6 %	633,109	602,108	- 4.9 %

# Hourly Vehicle Volumes

## Inbound Manhattan River Crossings ~ 2010 vs. 2000

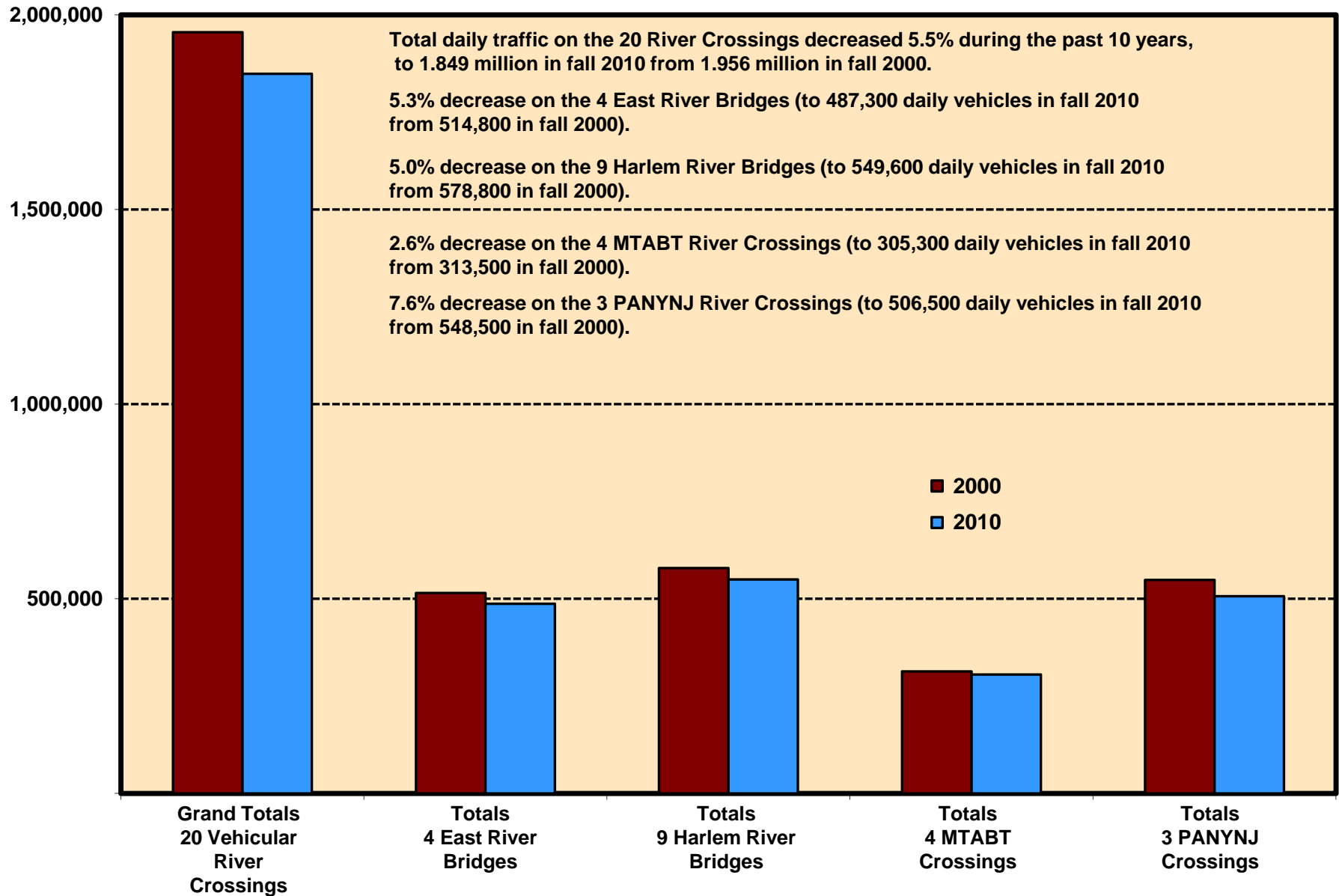


## Outbound Manhattan River Crossings ~ 2010 vs. 2000



# 10-Year Volume Changes ~ 2000 vs. 2010

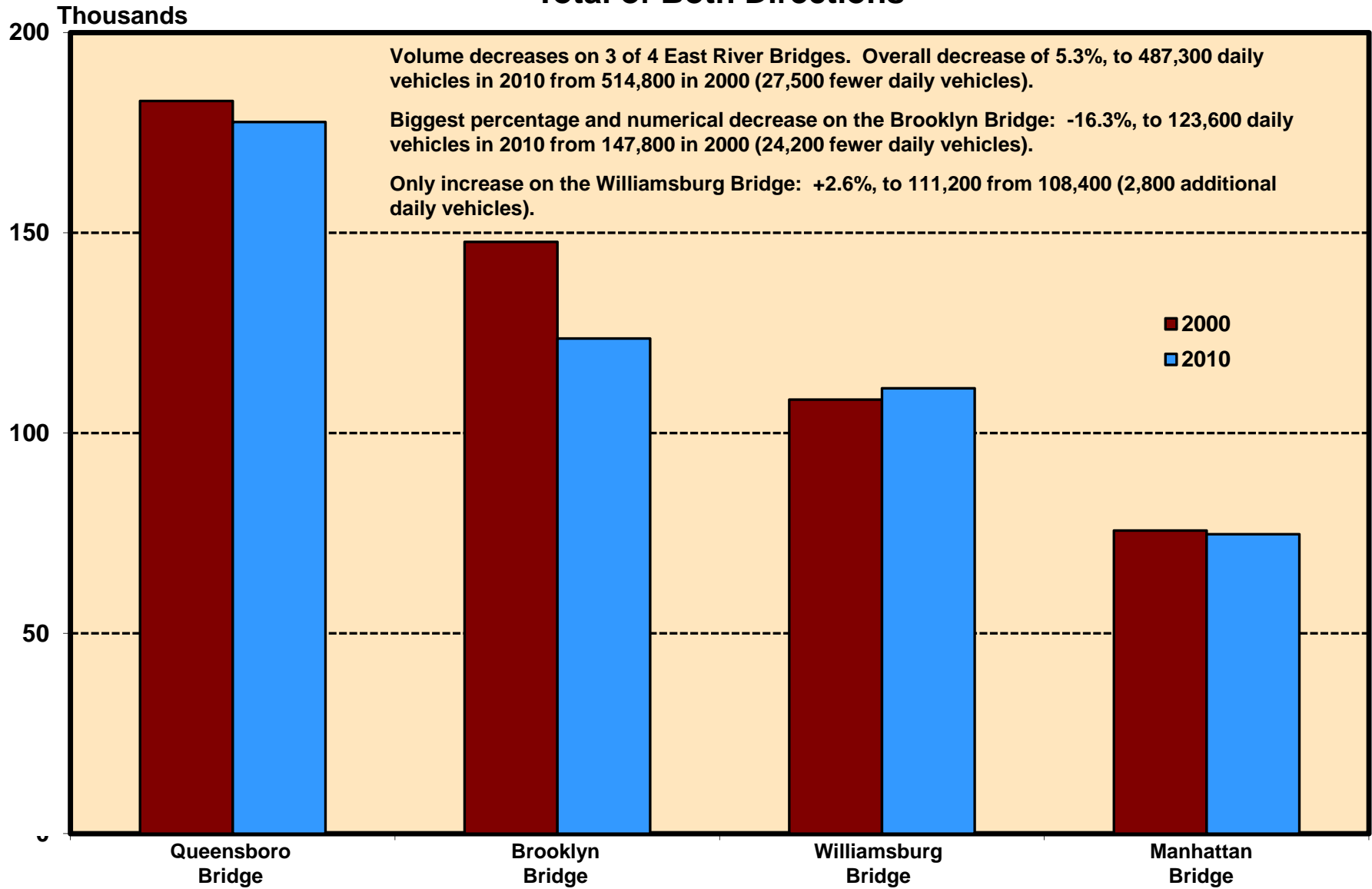
## Manhattan River Crossings Daily Volumes ~ Total of Both Directions



# 10-Year Volume Changes ~ 2000 – 2010

## East River Bridges Daily Volumes

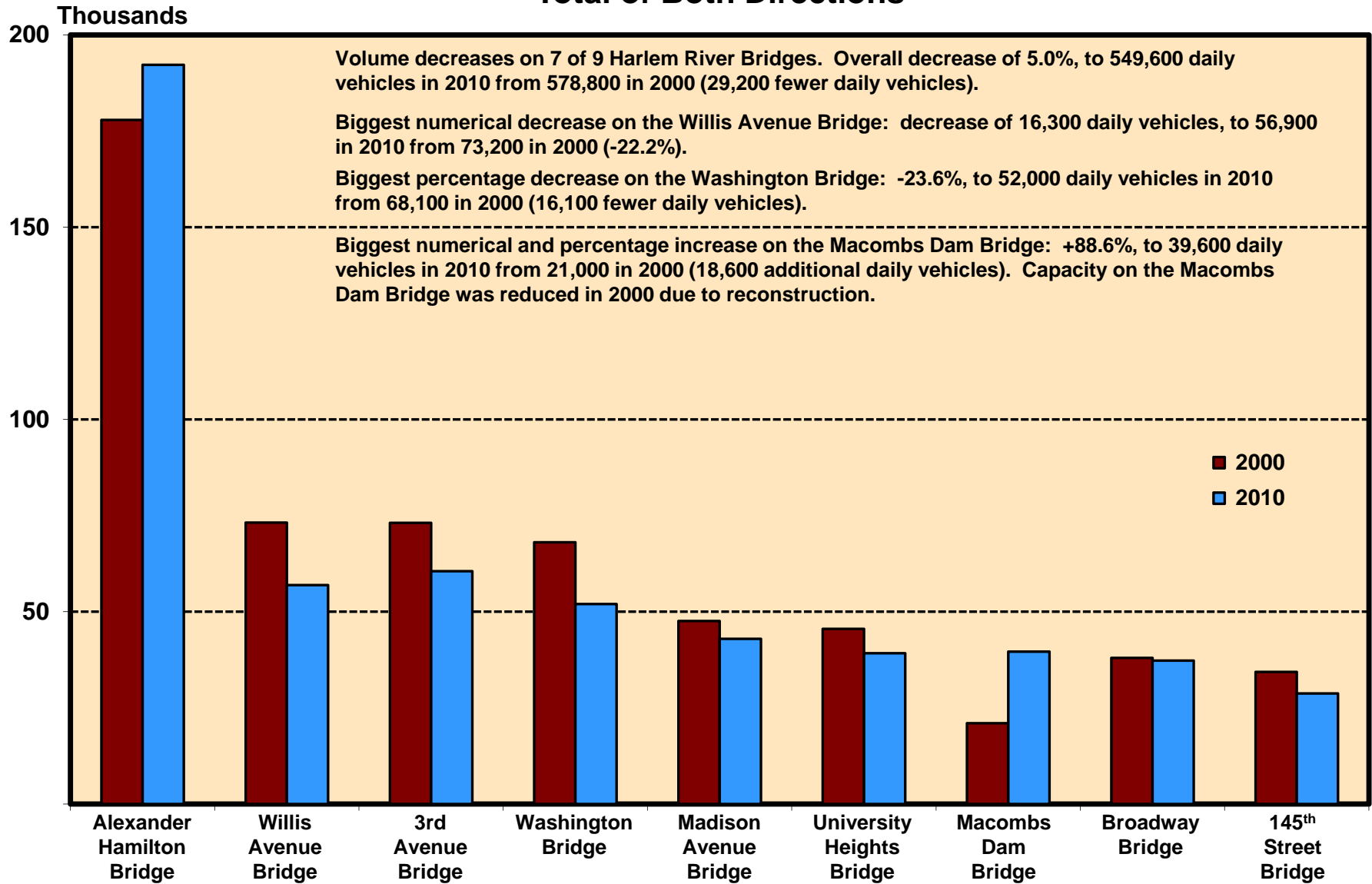
### Total of Both Directions



# 10-Year Volume Changes ~ 2000 – 2010

## Harlem River Bridges Daily Volumes

### Total of Both Directions

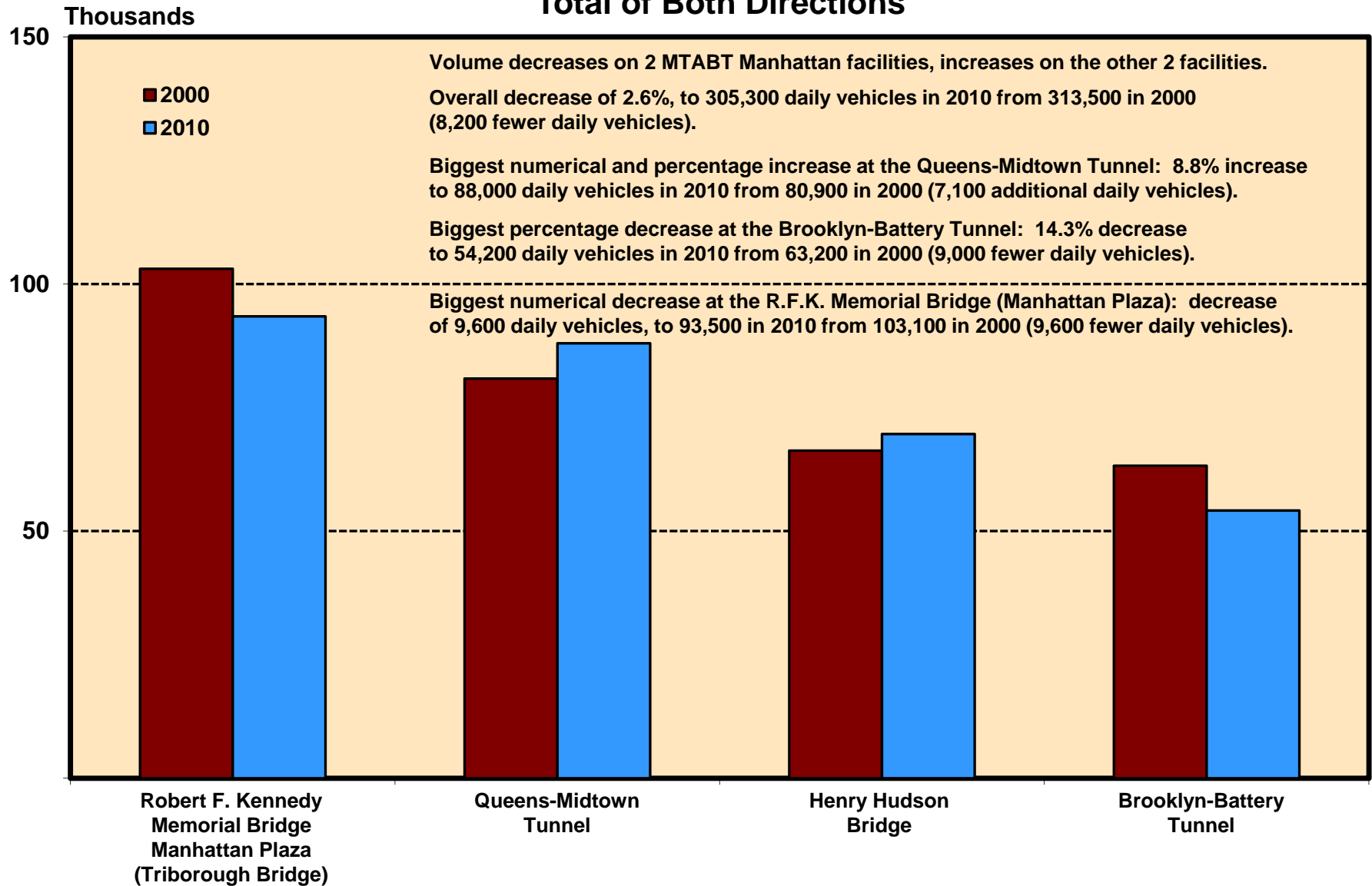




# 10-Year Volume Changes ~ 2000 – 2010

## Metropolitan Transportation Authority Bridges & Tunnels (MTABT) Manhattan Facilities Daily Volumes

### Total of Both Directions

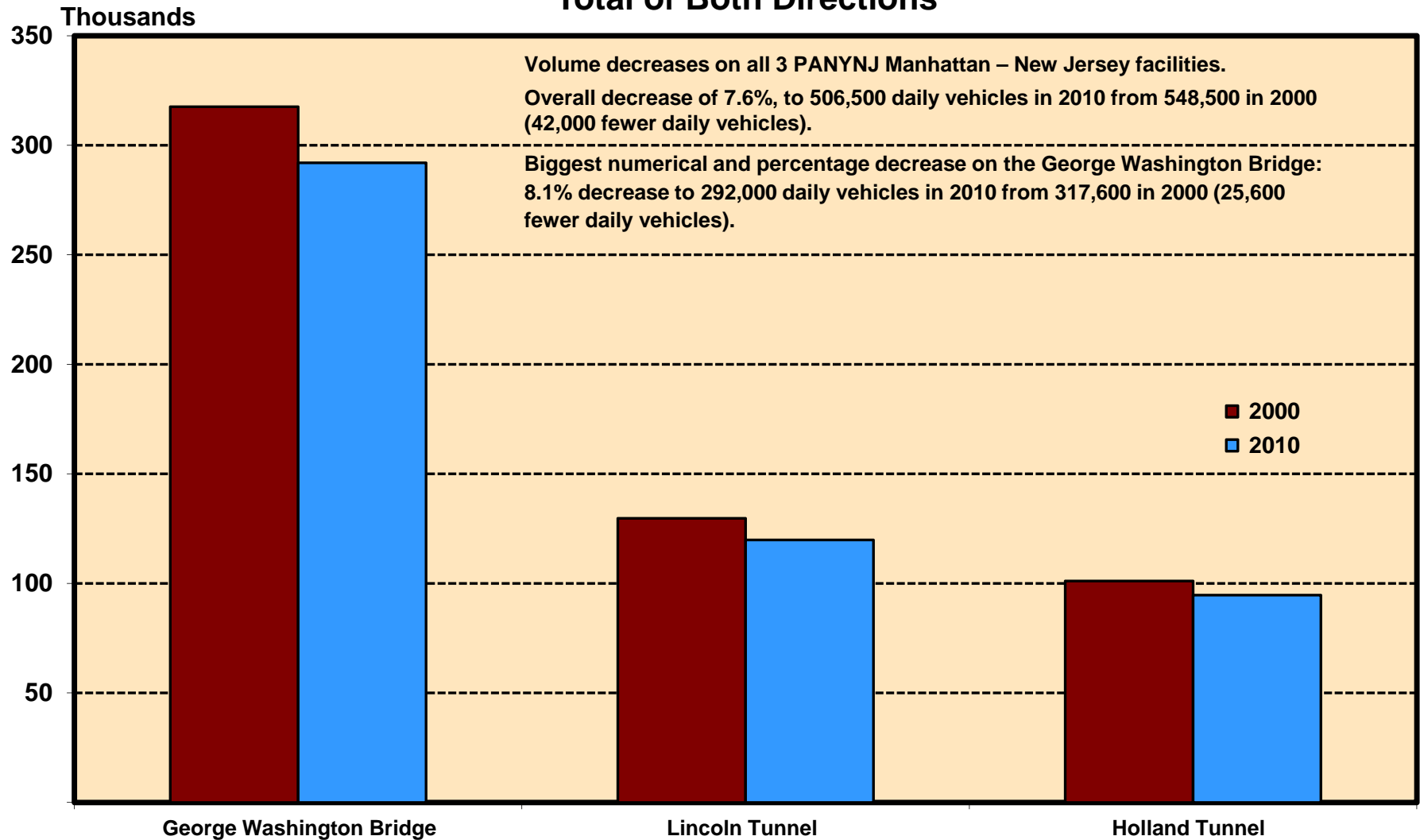


# 10-Year Volume Changes ~ 2000 – 2010

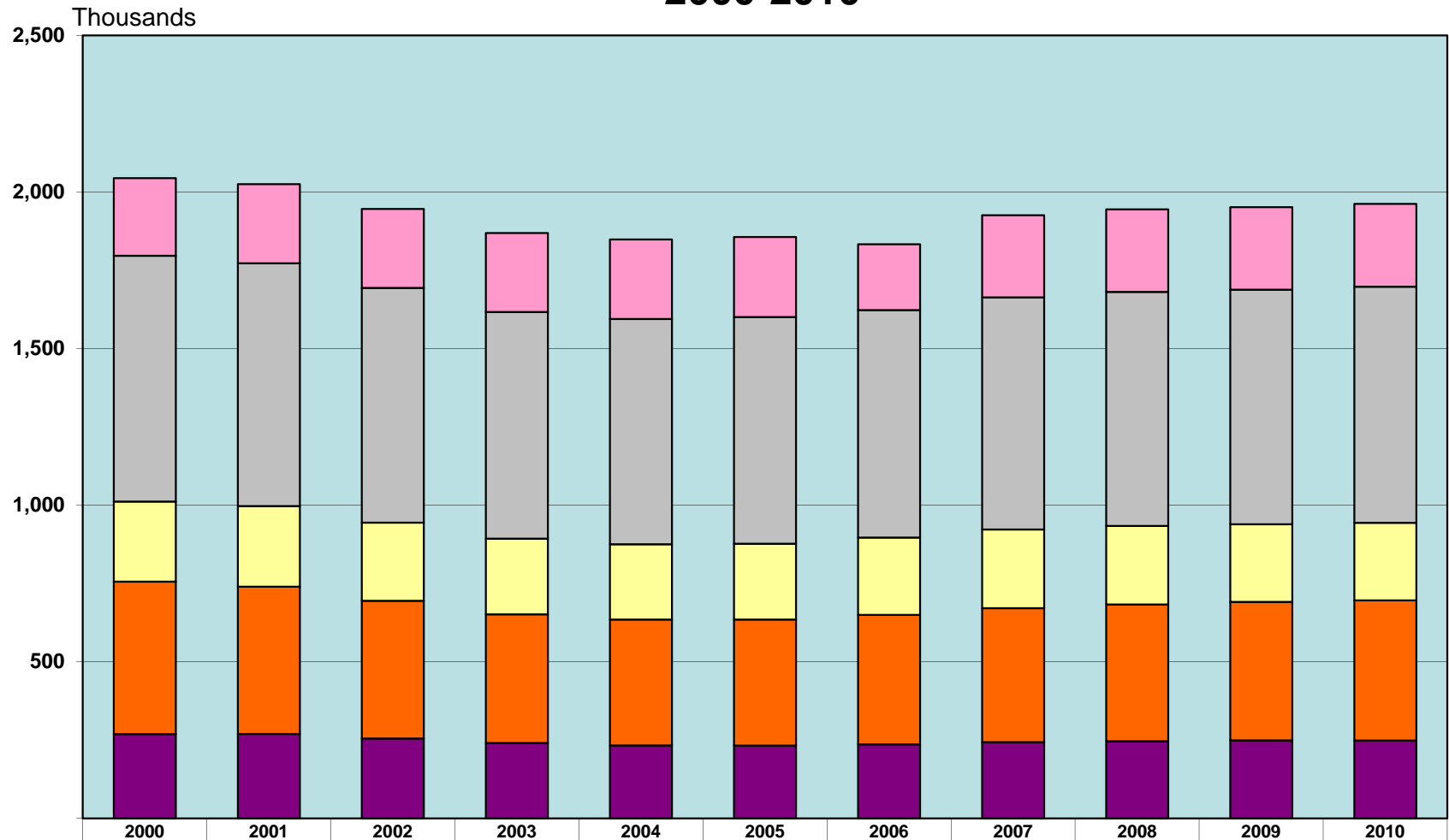
## Port Authority of New York & New Jersey (PANYNJ)

### Manhattan – N.J. Facilities Daily Volumes

#### Total of Both Directions



# New York City Motor Vehicle Registrations 2000-2010



Staten Island	247,848	252,657	252,542	252,422	254,108	255,794	210,182	262,318	263,633	263,571	264,658
Queens	784,848	774,887	749,146	723,400	719,289	723,534	726,623	741,226	747,403	748,982	753,743
Manhattan	255,780	257,531	249,716	241,995	240,388	242,200	246,956	251,136	250,915	248,064	247,965
Brooklyn	486,987	470,290	439,716	410,742	401,795	402,807	413,141	427,633	436,661	442,124	447,265
Bronx	268,910	269,577	255,087	240,592	232,990	232,189	236,468	243,523	246,190	248,963	248,600



# Historic Trends



3<sup>rd</sup> Avenue Bridge  
(Harlem River)



## HISTORIC TRENDS

In 1948, average daily traffic to and from Manhattan was 670,000 trips per day. By 1969 that figure had more than doubled, to 1,376,400 daily trips. In 2010, it stood at 1,848,700 daily trips, nearly three times the 1948 volume.

### 1948 – 1960

- Between 1948 and 1960, daily traffic to and from Manhattan increased 69.9%, to 1,138,200 daily river crossings in 1960 from 670,000 in 1948.
- Large increases in daily traffic occurred at the following facilities:
  - George Washington Bridge over the Hudson River (up 151% to 106,200 daily vehicles in 1960 from 42,300 in 1948).
  - Lincoln Tunnel under the Hudson River (up 145% to 75,700 in 1960 from 30,900 in 1948).
  - Robert F. Kennedy Memorial Bridge Manhattan Plaza over the Harlem River (up 139% to 63,100 from 26,500).
  - Queens-Midtown Tunnel under the East River (up 134% to 62,000 from 26,500).
  - Third Avenue Bridge over the Harlem River (up 117% to 68,100 from 31,400).
  - Brooklyn Bridge over the East River (up 99% to 73,500 from 37,000).
  - Willis Avenue Bridge over the Harlem River (up 99% to 59,100 from 29,600).
- The only decreases occurred at the following two facilities:
  - Manhattan Bridge over the East River (down 30.3% to 60,500 daily vehicles in 1960 from 86,700 in 1948).
  - Madison Avenue Bridge over the Harlem River (down 17.2% to 22,500 in 1960 from 27,200 in 1948).

### 1960 – 1970

- From 1960 to 1970, daily river crossings to and from Manhattan increased 24.8%, to 1,420,300 daily vehicles in 1970 from 1,138,200 in 1960.
- Large increases in daily traffic occurred at the following facilities:
  - George Washington Bridge over the Hudson River (up 83.5% to 194,900 daily vehicles in 1970 from 106,200 in 1960). The lower level was opened in 1962.
  - Robert F. Kennedy Memorial Bridge Manhattan Plaza over the Harlem River (up 34.9% to 85,100 from 63,100).
  - Brooklyn Bridge over the East River (up 36.1% to 100,100 from 73,500).
- Large decreases in daily traffic occurred at the following facilities:
  - Washington Bridge over the Harlem River (down 37.7% to 33,700 daily vehicles in 1970 from 54,000 in 1960).
  - Third Avenue Bridge over the Harlem River (down 29.3% to 48,100 from 68,100).
  - University Heights Bridge over the Harlem River (down 27.3% to 26,700 from 36,800).

## **1970 – 1980**

- From 1970 to 1980, daily river crossings to and from Manhattan increased just 5.6%, to 1,499,300 daily vehicles in 1980 from 1,420,300 in 1970.
- Large increases in daily traffic occurred at the following facilities:
  - George Washington Bridge over the Hudson River (up 20.9% to 235,600 daily vehicles in 1980 from 194,900 in 1970).
  - Alexander Hamilton Bridge over the Harlem River (up 7.9% to 152,900 from 141,600).
  - Williamsburg Bridge over the East River (up 13.1% to 82,700 from 73,100).
- Large decreases in daily traffic occurred at the following facilities:
  - Henry Hudson Bridge over the Harlem River (down 31.9% to 31,800 daily vehicles in 1980 from 46,700 in 1970).
  - Macombs Dam Bridge over the Harlem River (down 19.5% to 37,500 from 46,500).
  - Willis Avenue Bridge over the Harlem River (down 15.3% to 52,100 from 61,400).

## **1980 – 1990**

- From 1980 to 1990, daily river crossings to and from Manhattan increased 17.4%, to 1,759,600 daily vehicles in 1990 from 1,499,300 in 1980.
- Large increases in daily traffic occurred at the following facilities:
  - George Washington Bridge over the Hudson River (up 15.7% to 272,600 daily vehicles in 1990 from 235,600 in 1980).
  - Holland Tunnel under the Hudson River (up 36.6% to 88,000 from 64,400).
  - Alexander Hamilton Bridge over the Harlem River (up 26.2% to 192,800 from 152,900).
  - Henry Hudson Bridge over the Harlem River (up 80.8% to 57,500 from 31,800).
  - Williamsburg Bridge over the East River (up 32.4% to 109,500 from 82,700).
  - Brooklyn Bridge over the East River (up 24.7% to 129,600 from 104,000).
  - Washington Bridge over the Harlem River (up 62.0% to 61,700 from 38,100). In 1990, the nearby University Heights Bridge was closed in the Bronx-bound direction.
  - Broadway Bridge over the Harlem River (up 39.8% to 41,700 from 29,800).
- Large decreases in daily traffic occurred at the following facilities:
  - University Heights Bridge over the Harlem River (down 39.3% to 19,800 daily vehicles in 1990 from 32,600 in 1980). This bridge was closed in the Bronx-bound direction during 1990.
  - Manhattan Bridge over the East River (down 10.7% to 69,600 from 77,900).

## **1990 – 2000**

- From 1990 to 2000, daily river crossings to and from Manhattan increased 11.1%, to 1,955,500 daily vehicles in 2000 from 1,759,600 in 1990.



- Large increases in daily traffic occurred at the following facilities:
  - George Washington Bridge over the Hudson River (up 16.5% to 317,600 daily vehicles in 2000 from 272,600 in 1990).
  - Queensboro Bridge over the East River (up 30.6% to 182,900 from 140,100).
  - Holland Tunnel under the Hudson River (up 15.0% to 101,100 from 88,000).
  - University Heights Bridge over the Harlem River (up 130.5% to 45,600 from 19,800). This bridge had been closed in the Bronx-bound direction during 1990.
  - Madison Avenue Bridge over the Harlem River (up 46.6% to 47,600 from 32,500). The nearby Macombs Dam Bridge was undergoing reconstruction during 2000 which caused diversion to the Madison Avenue Bridge.
  - 145th Street Bridge over the Harlem River (up 42.2% to 34,400 from 24,200). The nearby Macombs Dam Bridge was undergoing reconstruction during 2000 which caused diversion to the 145<sup>th</sup> Street Bridge.
- Large decreases in daily traffic occurred at the following facilities:
  - Macombs Dam Bridge over the Harlem River (down 48.9% to 21,000 daily vehicles in 2000 from 41,100 in 1990). This bridge had a reduced capacity during 2000 as it was undergoing reconstruction.
  - Alexander Hamilton Bridge over the Harlem River (down 7.8% to 177,900 from 192,800).

## **1948 – 2010**

- From 1948 to 2000, Manhattan vehicular river crossings increased 176%, to 1,848,700 vehicles per day in 2010 from 670,000 vehicles per day in 1948 (1,178,700 additional daily trips).
  - 338% increase on PANYNJ's three trans-Hudson facilities (to 506,500 daily vehicles in 2010 from 115,800 in 1948).
  - 92% on the four toll-free East River bridges (to 487,300 from 254,100).
  - 165% on the nine toll-free Harlem River bridges (549,600 from 207,200).
  - 228% on MTABT's four tolled crossings (to 305,300 from 93,000).
- Large increases in daily traffic occurred at the following individual facilities:
  - George Washington Bridge over the Hudson River (up six fold to 292,000 vehicles per day in 2010 from 42,300 in 1948).
  - Brooklyn Bridge over the East River (up 234% to 123,600 from 37,000).
  - Lincoln Tunnel under the Hudson River (up 288% to 119,800 from 30,900).
  - Queens-Midtown Tunnel under the East River (up 233% to 88,000 from 26,500).
  - Robert F. Kennedy Memorial Bridge Manhattan Plaza over the Harlem River (up 253% to 93,500 from 26,500).
- The only decrease was on the Manhattan Bridge over the East River, where traffic decreased 14%, to 74,800 vehicles per day in 2010 from 86,700 in 1948.
- During the same 62-year period, annual citywide subway ridership declined by 21%, to 1,604,000,000 in 2010 from 2,031,000,000 in 1948.

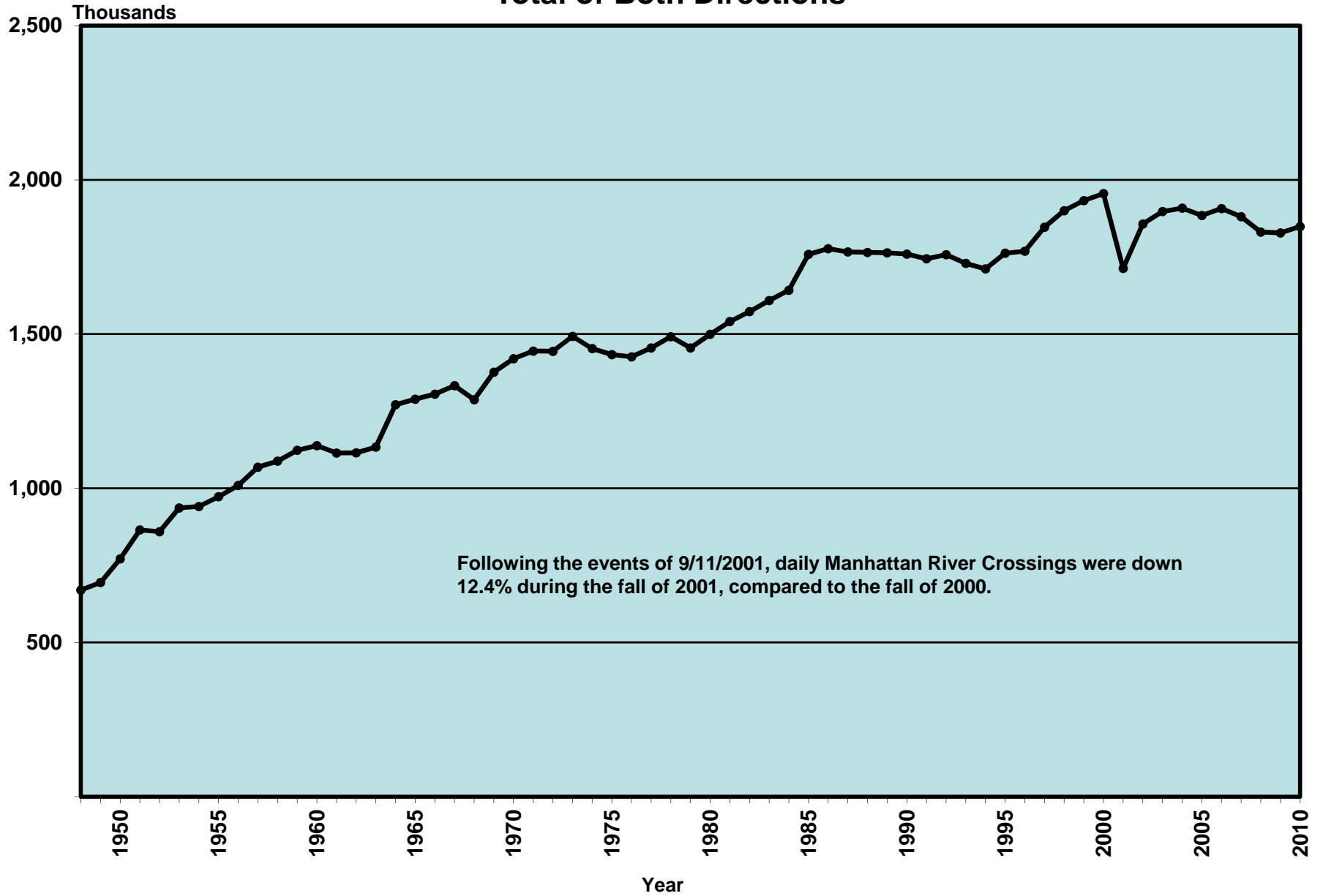
## **1990 – 2010**

- Over the past two decades, the long term trends of rapidly increasing Manhattan vehicular river crossings and declining subway ridership, which began after the end of World War II, have changed markedly.
  - Manhattan river crossings have increased just 5.1%, to 1.849 million in 2010 from 1.760 million in 1990.
  - Citywide subway ridership has increased by 56.0%, to 1,604 million daily riders in 2010 from 1,028 million in 1990.
  - Subway ridership in 2010 was the second highest of the past half century.

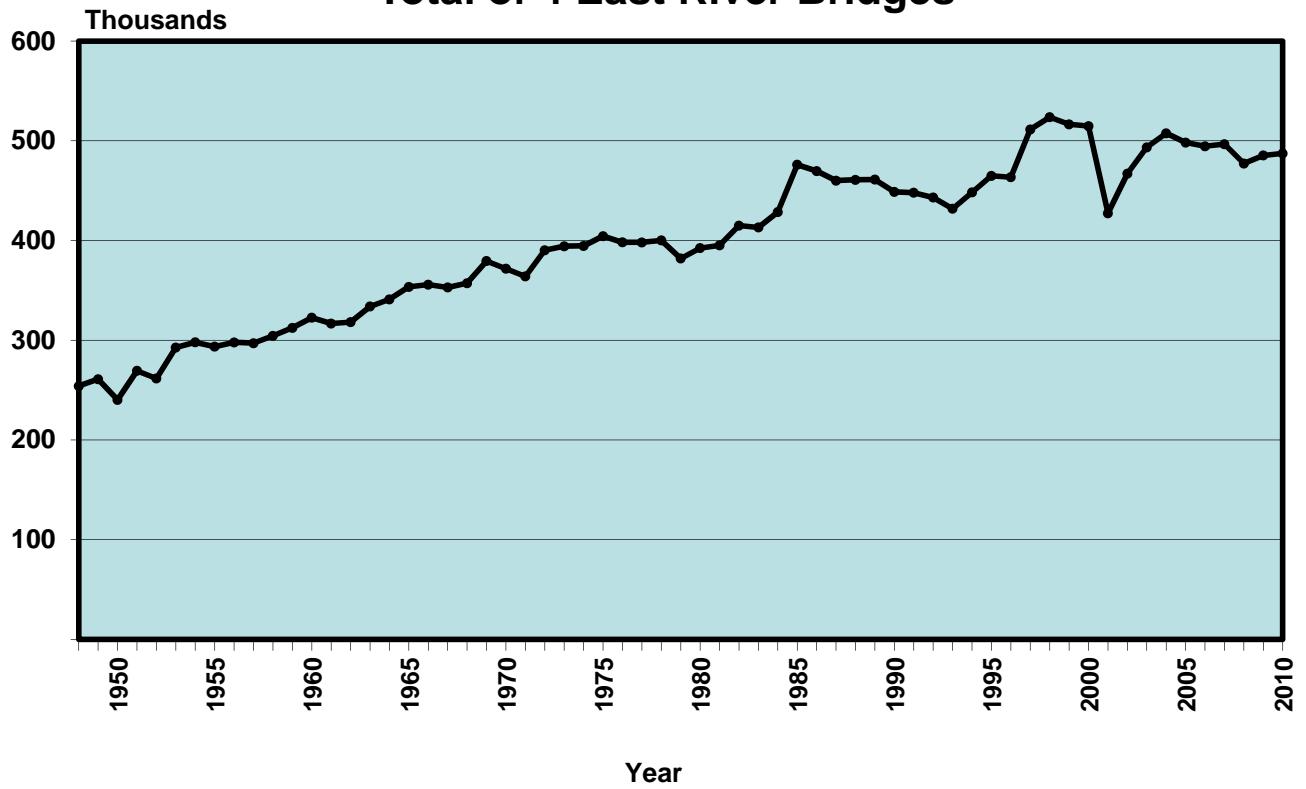
**Total Manhattan Crossings**  
**Average Daily Traffic Volumes**  
**1948 - 2010**

<b>Year</b>	<b>East River Bridges</b>	<b>Harlem River Bridges</b>	<b>M.T.A.B.T. Facilities</b>	<b>P.A.N.Y.N.J. Facilities</b>	<b>Totals</b>
1948	254,068	207,177	92,977	115,785	670,007
1949	260,933	193,510	110,071	129,943	694,457
1950	240,227	222,671	161,856	146,653	771,407
1951	269,352	249,199	180,272	166,150	864,973
1952	261,704	222,196	194,327	181,253	859,480
1953	292,726	248,629	200,535	194,577	936,467
1954	297,903	236,056	204,616	202,394	940,969
1955	293,633	250,239	216,835	211,926	972,633
1956	297,866	266,781	231,535	213,088	1,009,270
1957	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	400,146	450,758	241,125	399,512	1,491,541
1979	382,028	427,816	251,544	393,724	1,455,112
1980	392,460	446,292	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	463,482	530,950	281,116	493,194	1,768,742
1997	511,410	546,750	283,686	504,788	1,846,634
1998	523,690	560,062	293,990	522,512	1,900,254
1999	516,507	563,182	303,966	549,352	1,933,007
2000	514,767	578,770	313,504	548,465	1,955,506
2001	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
2005	498,213	561,392	297,411	527,717	1,884,733
2006	494,576	557,043	317,751	537,748	1,907,118
2007	496,666	557,925	312,253	513,974	1,880,818
2008	477,211	539,434	305,993	508,269	1,830,907
2009	485,313	543,736	294,156	504,860	1,828,065
2010	487,301	549,574	305,297	506,546	1,848,718

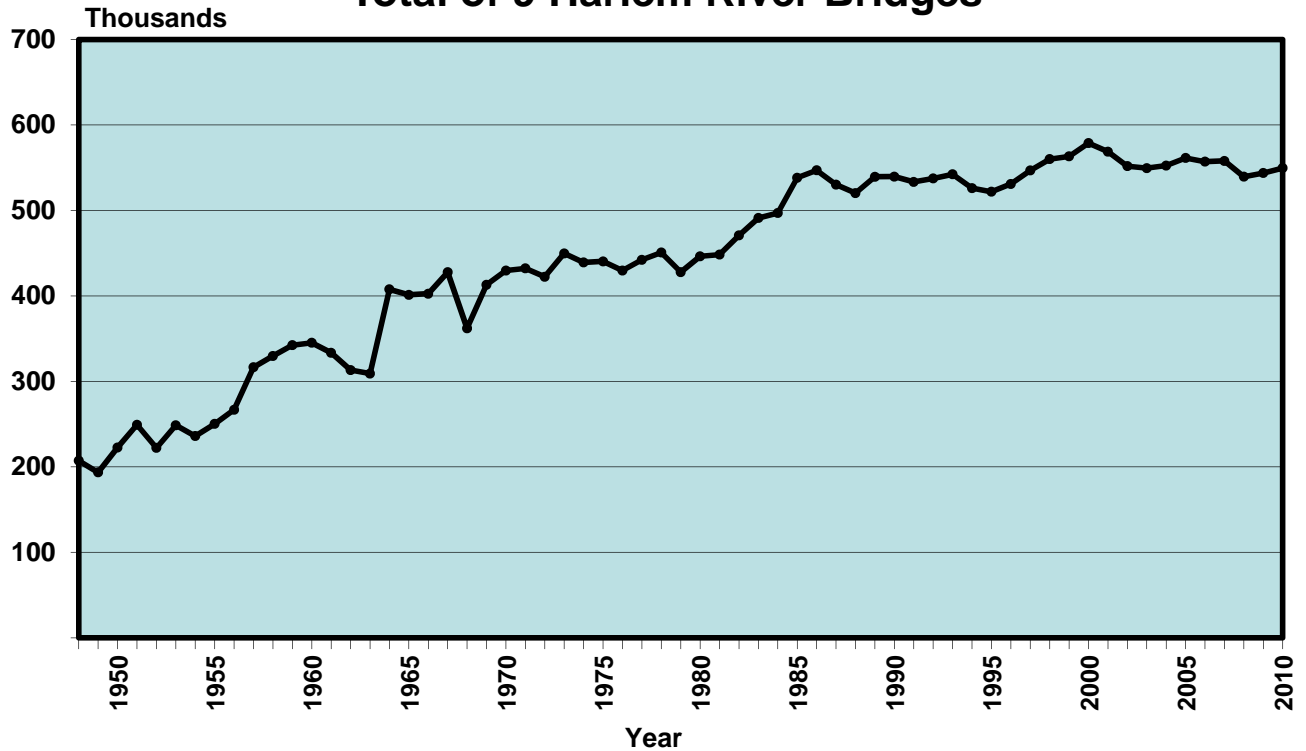
# Average Daily Manhattan River Crossings Total of Both Directions



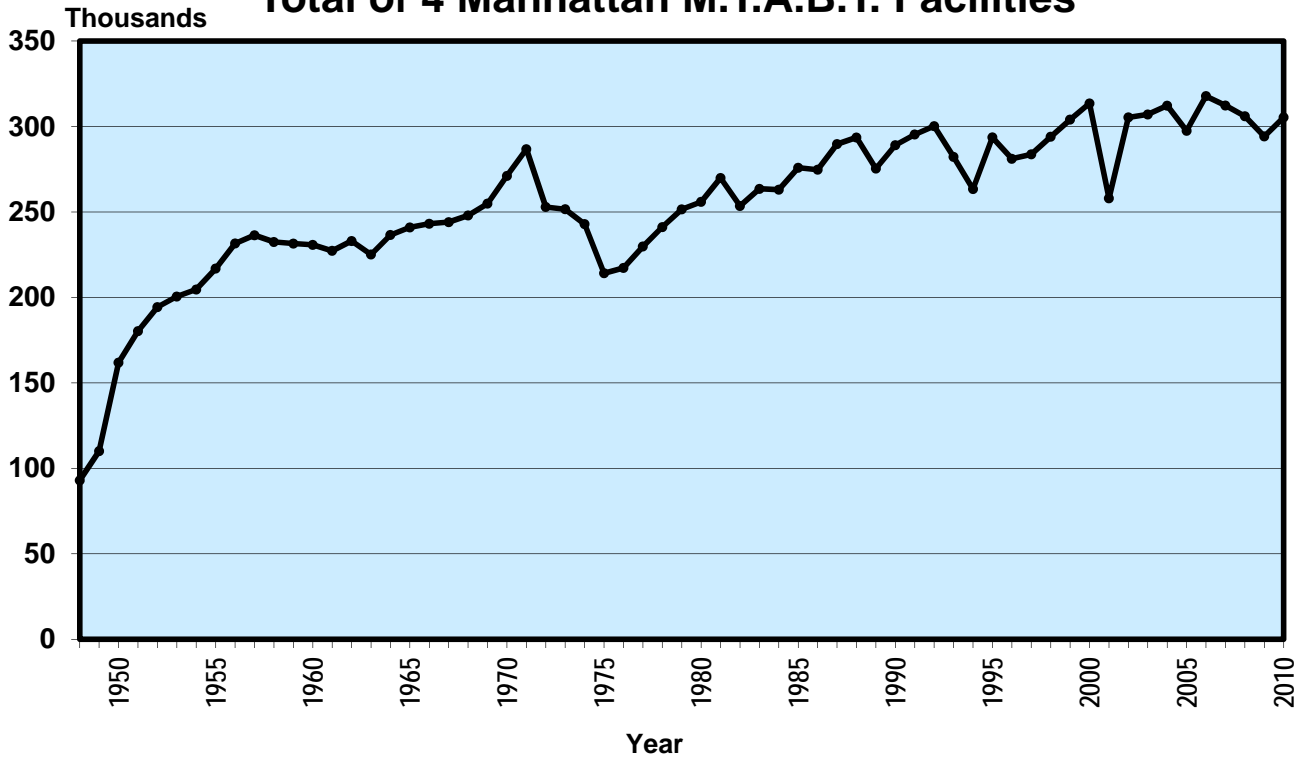
## Average Daily Traffic Volumes ~ Total of Both Directions Total of 4 East River Bridges



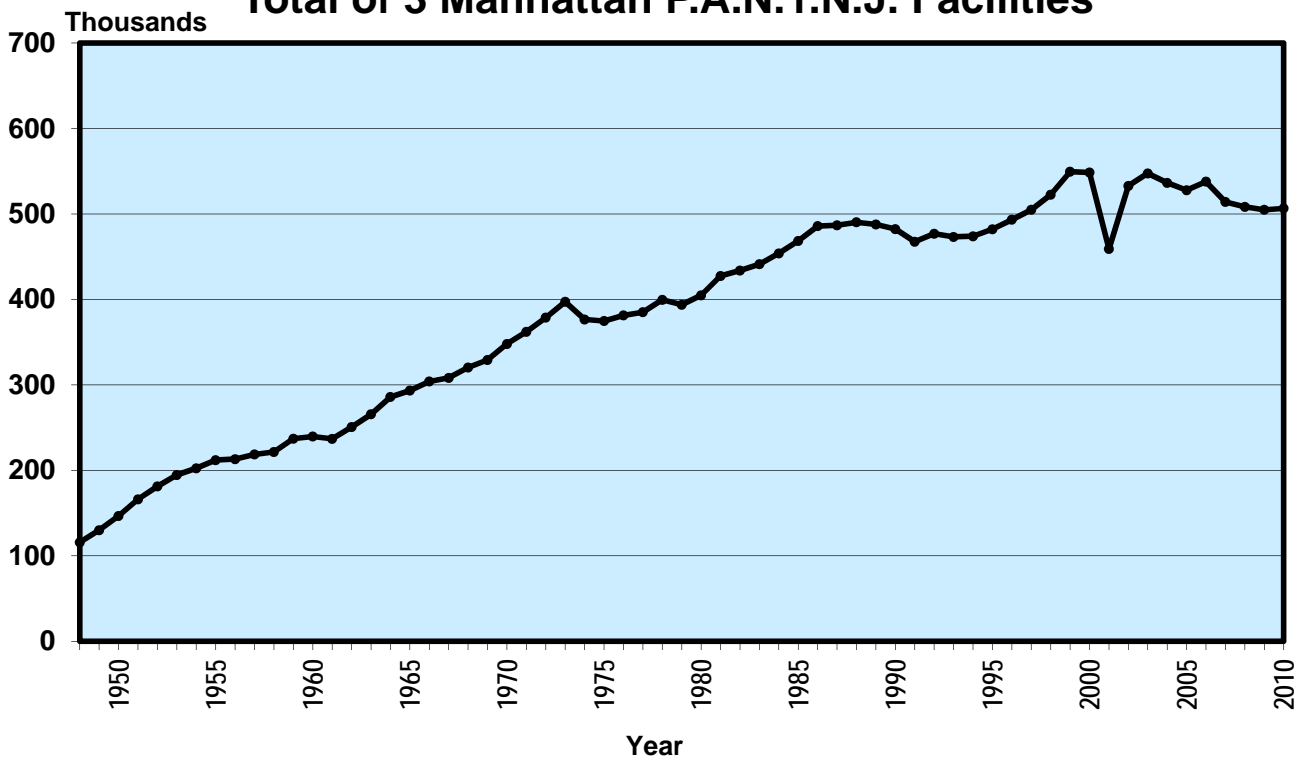
## Average Daily Traffic Volumes ~ Total of Both Directions Total of 9 Harlem River Bridges



### Average Daily Traffic Volumes ~ Total of Both Directions Total of 4 Manhattan M.T.A.B.T. Facilities



### Average Daily Traffic Volumes ~ Total of Both Directions Total of 3 Manhattan P.A.N.Y.N.J. Facilities

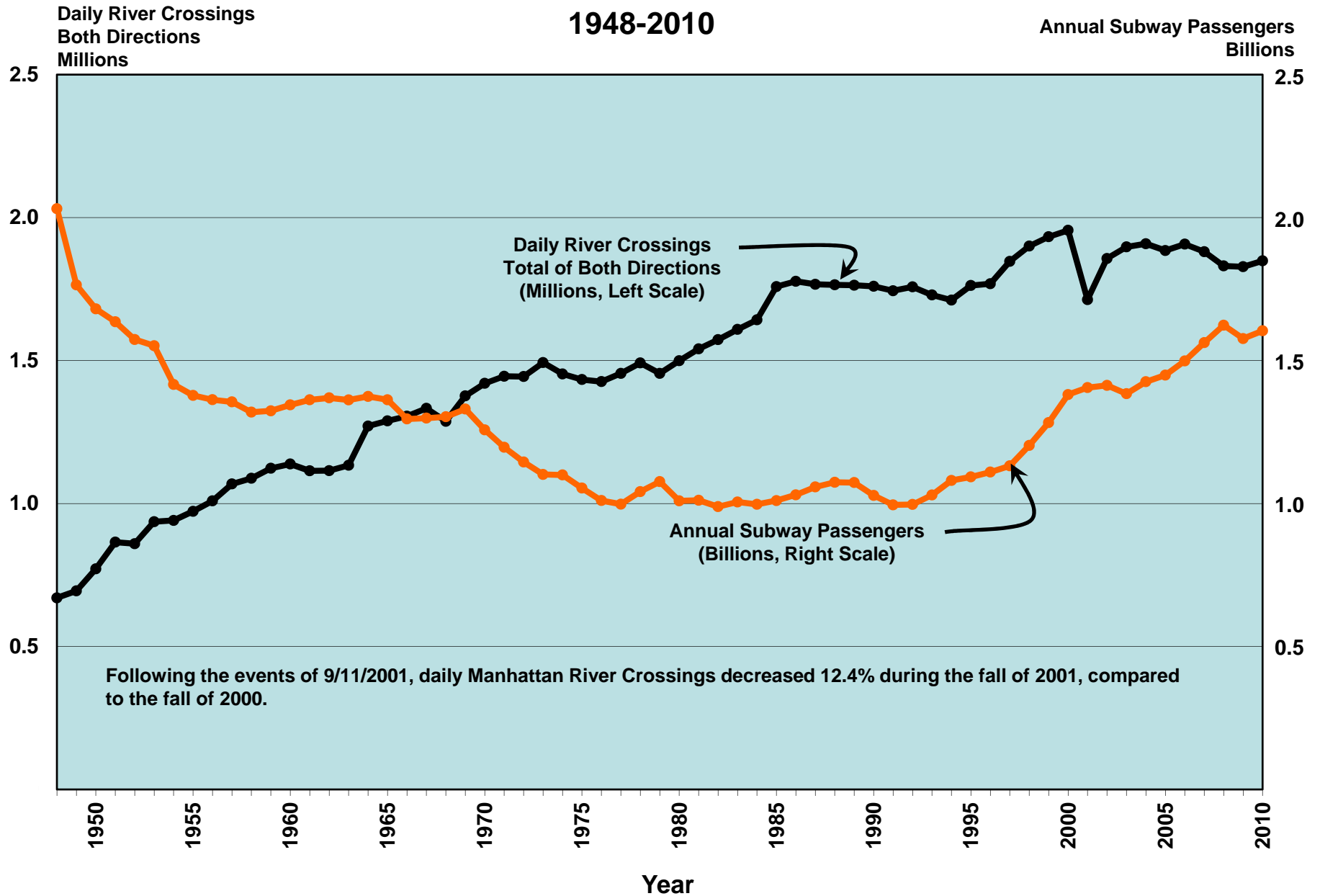


**Average Daily Manhattan River Motor Vehicle Crossings  
(Total of Both Directions)  
vs.  
Annual Subway Ridership**

Year	Daily Manhattan River Crossings	Annual Subway Ridership (millions)	Year	Daily Manhattan River Crossings	Annual Subway Ridership (millions)
1948	670,007	2,031			
1949	694,457	1,764			
1950	771,407	1,681			
1951	864,973	1,636	1981	1,540,683	1,011
1952	859,480	1,574	1982	1,573,012	989
1953	936,467	1,552	1983	1,608,979	1,005
1954	940,969	1,416	1984	1,642,250	997
1955	972,633	1,378	1985	1,758,605	1,010
1956	1,009,270	1,363	1986	1,777,051	1,030
1957	1,068,524	1,355	1987	1,766,601	1,058
1958	1,088,124	1,319	1988	1,764,869	1,074
1959	1,123,302	1,324	1989	1,763,534	1,073
1960	1,138,247	1,345	1990	1,759,585	1,028
1961	1,114,350	1,363	1991	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	2001	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	2005	1,884,733	1,449
1976	1,426,334	1,010	2006	1,907,118	1,499
1977	1,455,119	998	2007	1,880,818	1,563
1978	1,491,541	1,042	2008	1,830,907	1,624
1979	1,455,112	1,077	2009	1,828,065	1,579
1980	1,499,344	1,009	2010	1,848,718	1,604
Percent Changes					
Period	Average Daily Crossings	Annual Subway Ridership	Period	Average Daily Crossings	Annual Subway Ridership
1950-1960	+ 47.6 %	- 20.0 %	1990-2000	+ 11.1 %	+ 34.3 %
1960-1970	+ 24.8 %	- 6.5 %	2000-2010	- 5.5 %	+ 16.1 %
1970-1980	+ 5.6 %	- 19.8 %	1948-2010	+175.9 %	- 21.0 %
1980-1990	+ 17.4 %	+ 1.9 %			

Source for Annual Subway Ridership: MTA

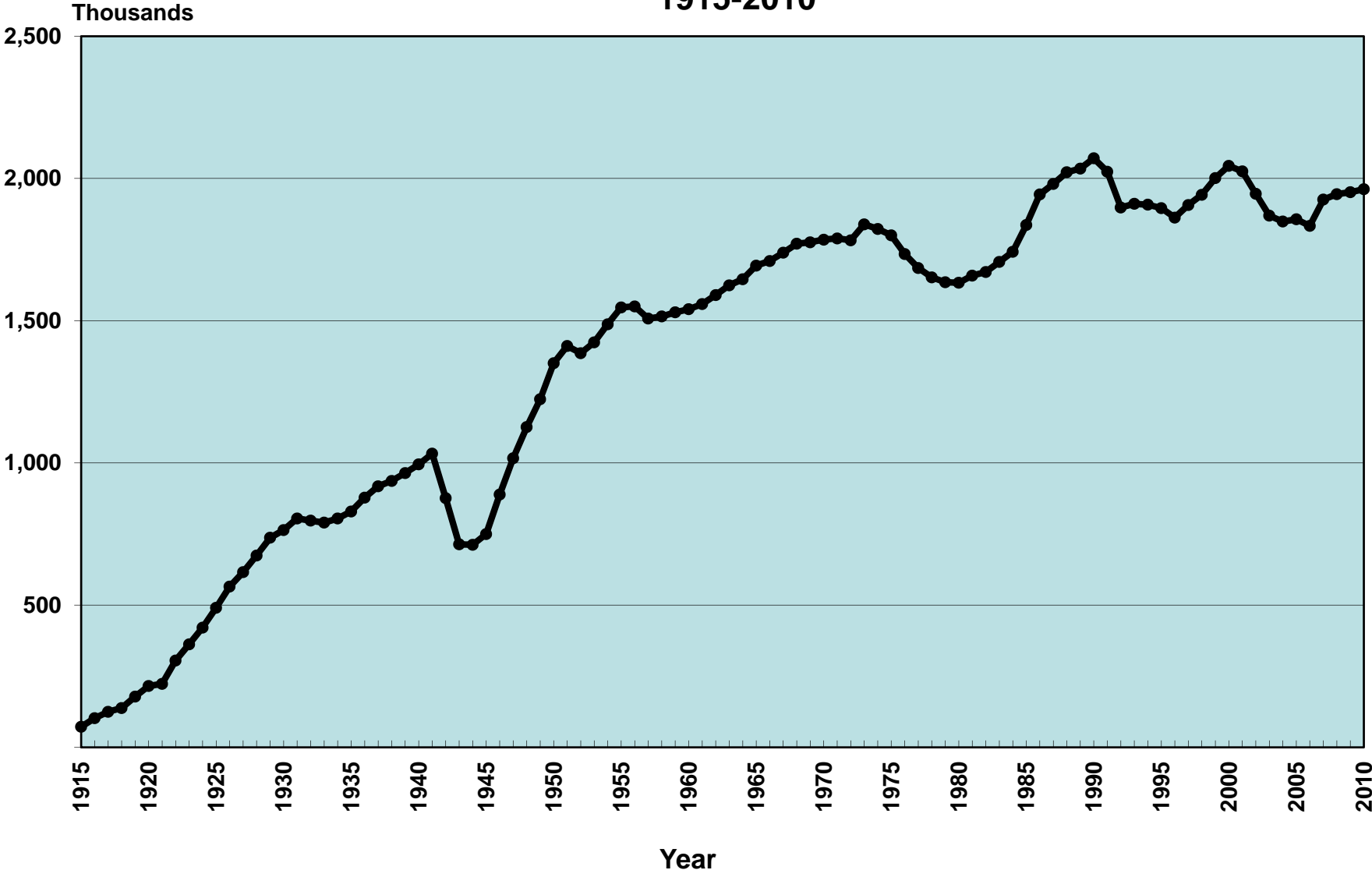
# Vehicular River Crossings vs. Subway Ridership





# New York City Motor Vehicle Registrations

1915-2010



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.

## PAST & PRESENT PASSENGER CAR TOLL STRUCTURES

### MTA BRIDGES & TUNNELS FACILITIES

*Tolls collected both directions*

	Brooklyn Battery Tunnel	Queens Midtown Tunnel	Robert F. Kennedy Memorial Bridge*	Henry Hudson Bridge
Prior to 01/06/1972	\$ 0.35	\$ 0.25	\$ 0.25	\$ 0.10
Effective 01/06/1972	0.70	0.50	0.50	0.25
Effective 09/01/1975	0.75	0.75	0.75	0.50
Effective 05/19/1980	1.00	1.00	1.00	0.60
Effective 04/19/1982	1.25	1.25	1.25	0.90
Effective 01/03/1984	1.50	1.50	1.50	0.90
Effective 01/02/1986	1.75	1.75	1.75	1.00
Effective 02/07/1987	2.00	2.00	2.00	1.00
Effective 07/16/1989	2.50	2.50	2.50	1.25
Effective 01/31/1993	3.00	3.00	3.00	1.50
Effective 03/24/1996	3.50	3.50	3.50	1.75
Effective 05/18/2003	4.00	4.00	4.00	2.00
Effective 03/18/2005	4.50	4.50	4.50	2.25
Effective 03/16/2008	5.00	5.00	5.00	2.75
Effective 07/12/2009	5.50	5.50	5.50	3.00
Effective 12/30/2010	6.50	6.50	6.50	4.00

\$ 1.70 discount EZ Pass (\$ 1.80 on Henry Hudson Bridge).

\*Formerly Triborough Bridge.

### PORT AUTHORITY OF NEW YORK & NEW JERSEY

*Tolls collected eastbound only*

	George Washington Bridge	Holland Tunnel	Lincoln Tunnel
Effective 08/12/1970	\$ 1.00	\$ 1.00	\$ 1.00
Effective 05/05/1975	1.50	1.50	1.50
Effective 01/01/1984	2.00	2.00	2.00
Effective 04/12/1987	3.00	3.00	3.00
Effective 04/07/1991	4.00	4.00	4.00
Effective 03/25/2001	6.00	6.00	6.00
Effective 03/02/2008	8.00	8.00	8.00

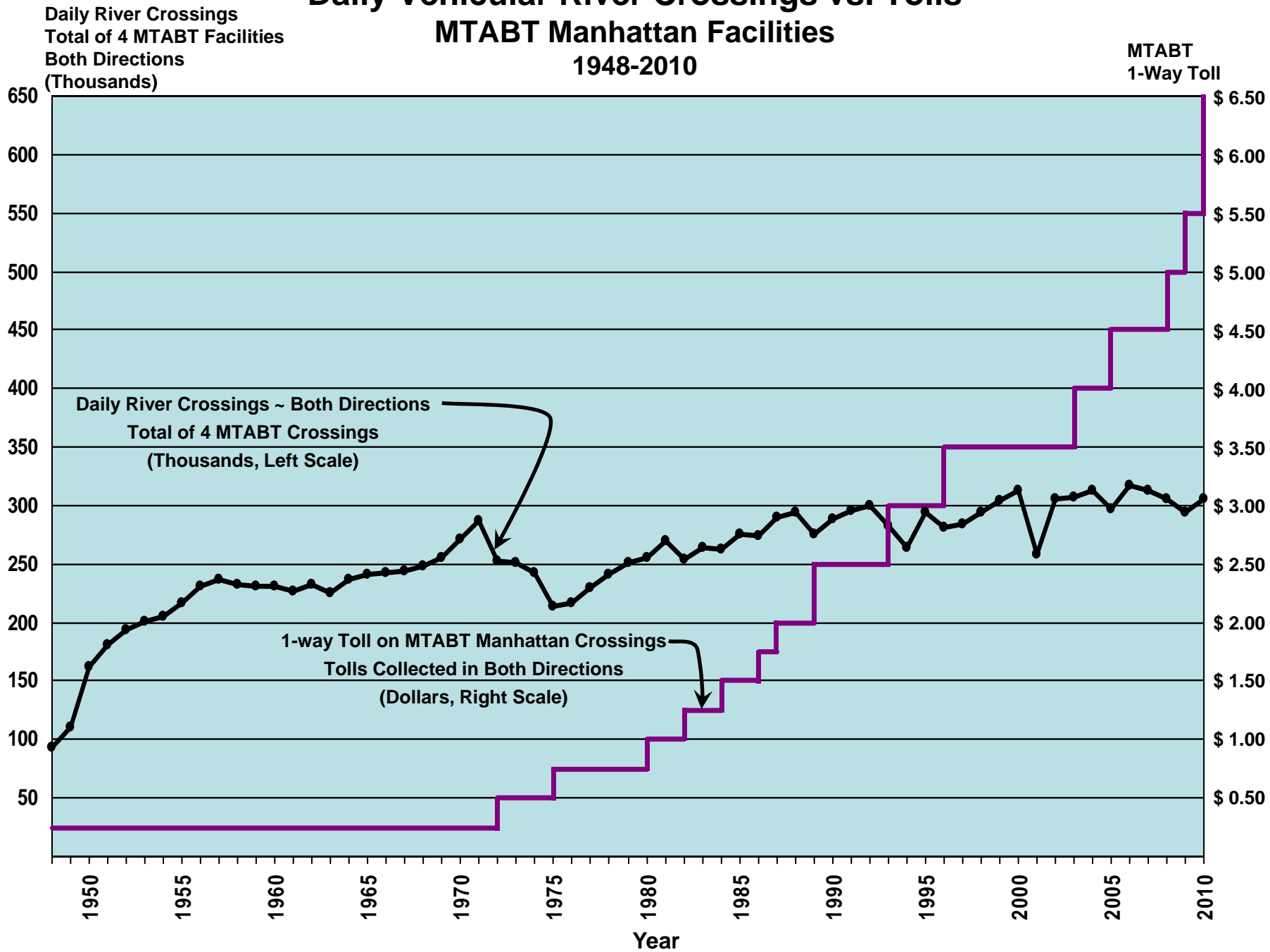
EZ-Pass discount \$ 2.00 during off-peak hours.

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

# Daily Vehicular River Crossings vs. Tolls

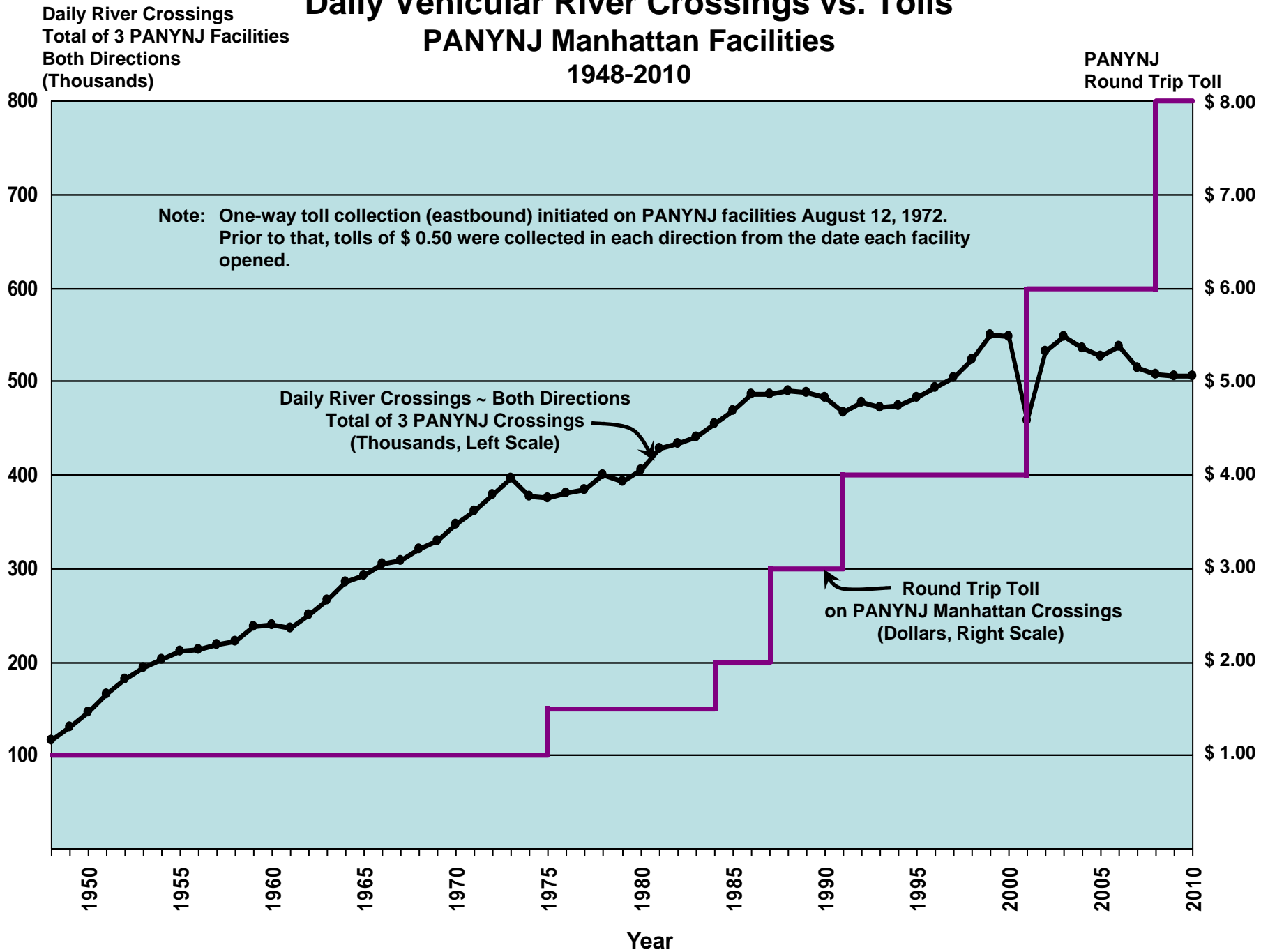
## MTABT Manhattan Facilities

1948-2010



# Daily Vehicular River Crossings vs. Tolls

## PANYNJ Manhattan Facilities 1948-2010



# East River Bridges



**Manhattan Bridge**



**East River Bridges**  
**Average Daily Traffic Volumes**  
**1948 - 2010**

<i>Year</i>	<i>Brooklyn Bridge</i>	<i>Manhattan Bridge</i>	<i>Queensboro Bridge</i>	<i>Williamsburg Bridge</i>	<i>Totals</i>
1948	37,011	86,717	83,201	47,139	254,068
1949	37,244	80,420	88,821	54,448	260,933
1950	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
2005	132,210	80,363	178,610	107,030	498,213
2006	126,805	74,621	186,110	107,040	494,576
2007	131,551	73,205	181,365	110,545	496,666
2008	123,781	70,341	176,306	106,783	477,211
2009	125,021	71,936	180,162	108,194	485,313
2010	123,640	74,777	177,695	111,189	487,301

### Hourly Vehicular Volumes Brooklyn Bridge - 2010

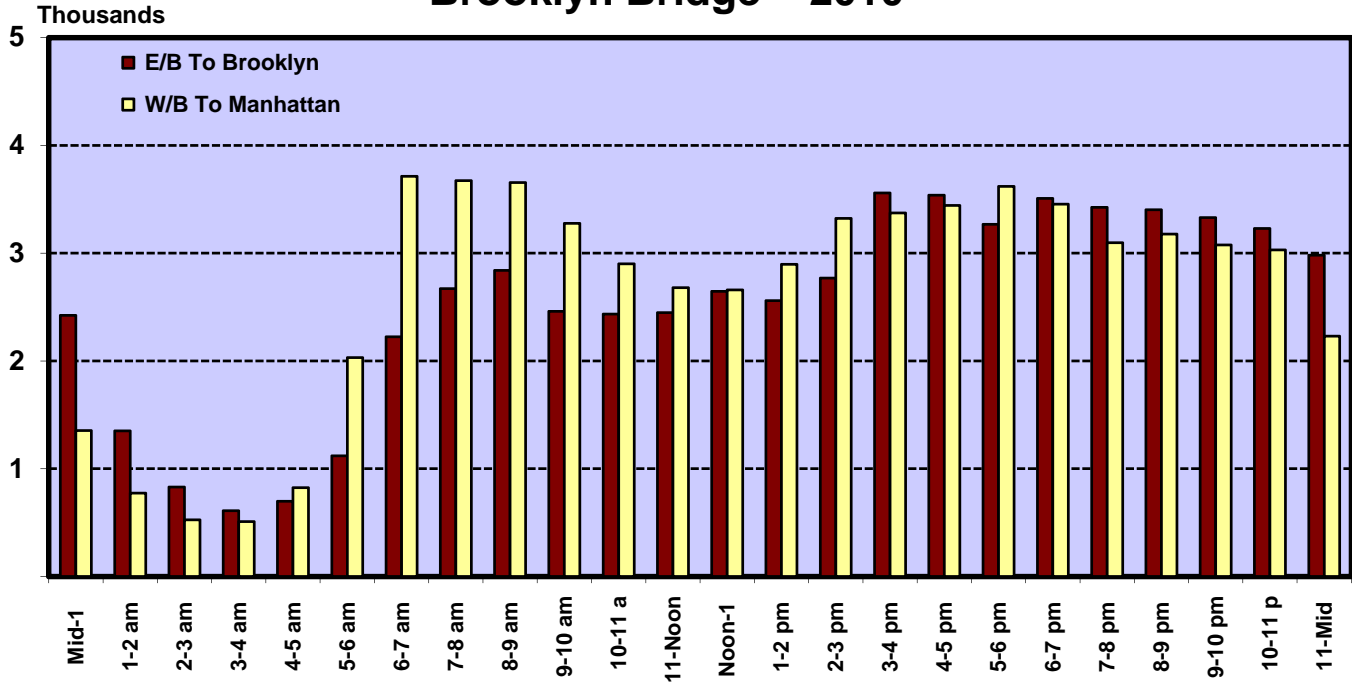
FHWA Classes ▶	Eastbound to Brooklyn						Westbound to Manhattan						2-Way Grand Totals
	Commuter Vans Commercial Vans		Single Unit Trucks	Tractor Trailers	Total Vehicles		Commuter Vans Commercial Vans		Single Unit Trucks	Tractor Trailers	Total Vehicles		
	Autos & Motorcycles	Pickups Large SUVs					Buses	Autos & Motorcycles					
	1 & 2	3	4	5 - 7	8 - 13		1 & 2	3	4	5 - 7	8 - 13		
12-1am	2,421	1	1	0	0	2,423	1,338	13	0	4	0	1,355	3,778
1-2am	1,345	5	1	0	0	1,351	770	4	0	0	0	774	2,125
2-3am	827	3	0	0	0	830	518	6	0	2	0	526	1,356
3-4am	605	5	1	0	0	611	500	7	0	2	0	509	1,120
4-5am	688	8	2	0	0	698	816	5	1	3	0	825	1,523
5-6am	1,105	14	1	0	0	1,120	1,967	35	25	5	0	2,032	3,152
6-7am	2,180	33	10	1	0	2,224	3,583	44	85	2	0	3,714	5,938
7-8am	2,616	34	20	1	0	2,671	3,609	24	38	2	0	3,673	6,344
8-9am	2,771	45	23	1	0	2,840	3,614	29	10	3	0	3,656	6,496
9-10am	2,389	44	27	1	0	2,461	3,232	27	11	7	0	3,277	5,738
10-11am	2,390	29	17	0	0	2,436	2,861	23	12	6	0	2,902	5,338
11-12am	2,379	45	24	0	0	2,448	2,627	34	13	7	0	2,681	5,129
12-1pm	2,574	47	25	0	0	2,646	2,613	22	23	2	0	2,660	5,306
1-2pm	2,494	37	28	1	0	2,560	2,799	37	51	10	0	2,897	5,457
2-3pm	2,692	37	40	1	0	2,770	3,254	34	32	3	0	3,323	6,093
3-4pm	3,483	37	40	0	0	3,560	3,296	38	38	1	0	3,373	6,933
4-5pm	3,476	36	25	1	0	3,538	3,387	36	18	2	0	3,443	6,981
5-6pm	3,214	35	19	0	0	3,268	3,578	24	16	2	0	3,620	6,888
6-7pm	3,439	53	16	1	0	3,509	3,414	27	13	2	0	3,456	6,965
7-8pm	3,384	37	5	0	0	3,426	3,076	15	6	0	0	3,097	6,523
8-9pm	3,385	16	2	0	0	3,403	3,152	21	2	2	0	3,177	6,580
9-10pm	3,316	14	1	0	0	3,331	3,047	25	3	1	0	3,076	6,407
10-11pm	3,222	6	1	0	0	3,229	3,005	22	0	3	0	3,030	6,259
11-12pm	2,973	6	2	0	0	2,981	2,208	18	1	3	0	2,230	5,211
Totals	59,368	627	331	8	0	60,334	62,264	570	398	74	0	63,306	123,640
7-10am	7,776	123	70	3	0	7,972	10,455	80	59	12	0	10,606	18,578
10am-1pm	7,343	121	66	0	0	7,530	8,101	79	48	15	0	8,243	15,773
1-4pm	8,669	111	108	2	0	8,890	9,349	109	121	14	0	9,593	18,483
4-7pm	10,129	124	60	2	0	10,315	10,379	87	47	6	0	10,519	20,834
7am-7pm	33,917	479	304	7	0	34,707	38,284	355	275	47	0	38,961	73,668
6-10am	9,956	156	80	4	0	10,196	14,038	124	144	14	0	14,320	24,516
3-7pm	13,612	161	100	2	0	13,875	13,675	125	85	7	0	13,892	27,767
6am-7pm	36,097	512	314	8	0	36,931	41,867	399	360	49	0	42,675	79,606

Based on March 2006 Classification Survey Data.

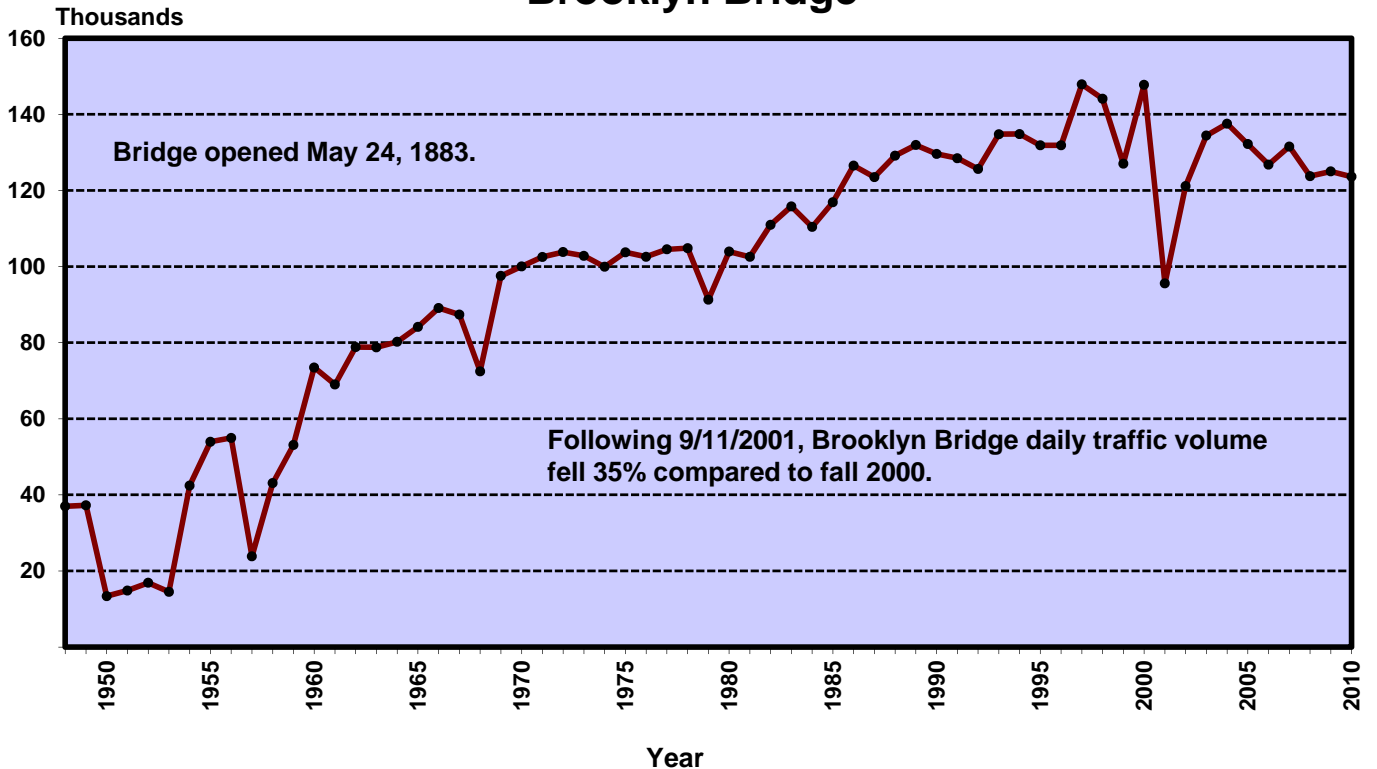
\*\* Peak Volumes



## Hourly Vehicular Volumes Brooklyn Bridge ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions Brooklyn Bridge



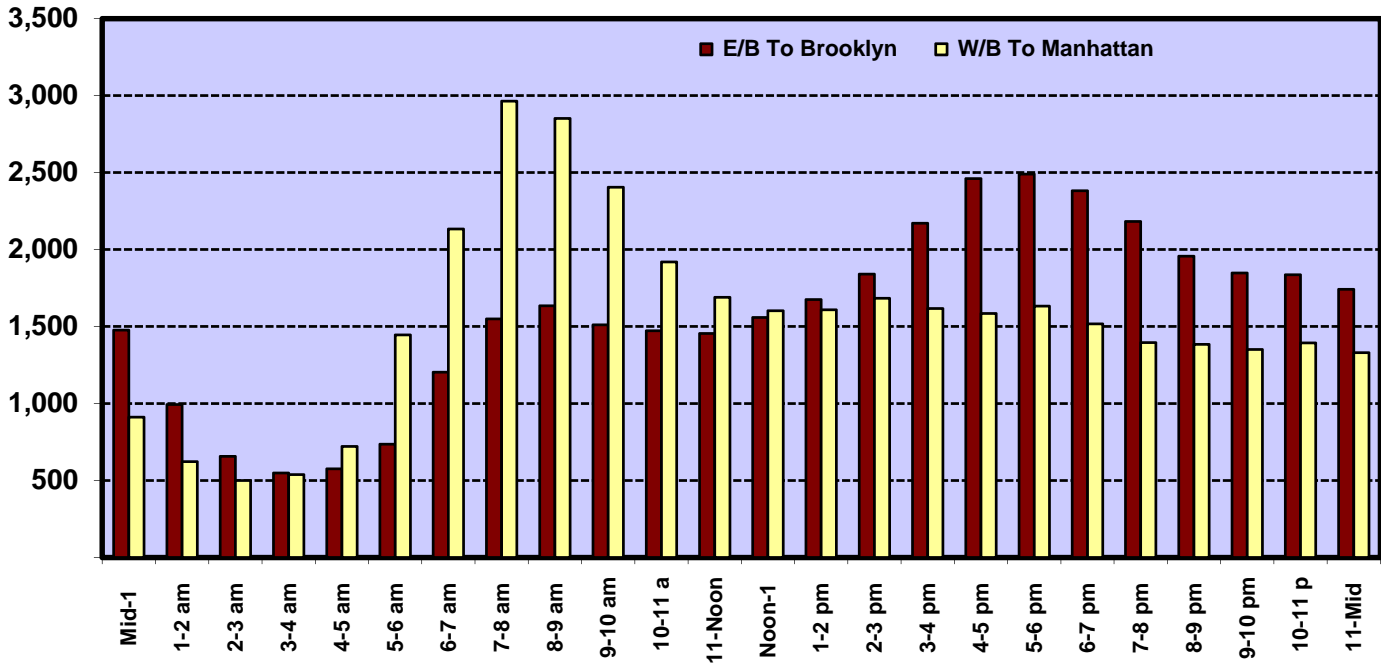
### Hourly Vehicular Volumes Manhattan Bridge - 2010

FHWA Classes ▶	<i>Eastbound to Brooklyn</i>						<i>Westbound to Manhattan</i>						<b>2-Way Grand Totals</b>
	Commuter Vans		Single Unit Trucks	Tractor Trailers	Total Vehicles		Commuter Vans		Single Unit Trucks	Tractor Trailers	Total Vehicles		
	Autos & Motorcycles	Pickups Large SUVs					Buses	Autos & Motorcycles					
	1 & 2	3	4	5 - 7	8 - 13		1 & 2	3	4	5 - 7	8 - 13		
12-1am	1,430	20	8	16	3	1,477	897	10	1	4	0	912	2,389
1-2am	969	13	3	8	1	994	611	9	1	2	0	623	1,617
2-3am	634	10	2	10	1	657	489	5	1	5	0	500	1,157
3-4am	518	11	2	14	4	549	522	8	3	5	1	539	1,088
4-5am	550	6	2	17	1	576	699	7	5	11	0	722	1,298
5-6am	707	6	7	15	1	736	1,246	23	31	125	21	1,446	2,182
6-7am	1,072	27	30	67	8	1,204	1,697	52	65	281	39	2,134	3,338
7-8am	1,309	45	51	137	8	1,550	2,368	62	75	438	21	2,964 **	4,514 **
8-9am	1,378	32	53	159	13	1,635	2,351	49	54	378	20	2,852	4,487
9-10am	1,221	34	59	186	11	1,511	1,896	46	44	393	26	2,405	3,916
10-11am	1,206	22	51	182	12	1,473	1,465	40	40	346	29	1,920	3,393
11-12am	1,180	32	50	181	12	1,455	1,288	42	31	313	16	1,690	3,145
12-1pm	1,215	40	53	238	13	1,559	1,173	42	39	333	16	1,603	3,162
1-2pm	1,314	46	57	248	11	1,676	1,152	40	47	355	15	1,609	3,285
2-3pm	1,524	34	54	214	15	1,841	1,373	38	42	221	10	1,684	3,525
3-4pm	1,849	47	90	179	6	2,171	1,402	29	33	141	12	1,617	3,788
4-5pm	2,229	54	63	108	7	2,461	1,354	30	35	158	8	1,585	4,046
5-6pm	2,297	43	60	81	9	2,490 **	1,427	27	45	131	3	1,633	4,123
6-7pm	2,227	31	56	62	6	2,382	1,347	12	56	100	3	1,518	3,900
7-8pm	2,040	28	58	50	7	2,183	1,262	19	40	75	0	1,396	3,579
8-9pm	1,862	20	35	37	3	1,957	1,277	13	22	71	2	1,385	3,342
9-10pm	1,777	23	22	22	4	1,848	1,282	11	15	42	1	1,351	3,199
10-11pm	1,759	27	21	25	5	1,837	1,345	11	8	30	0	1,394	3,231
11-12pm	1,687	14	14	23	4	1,742	1,309	4	3	14	1	1,331	3,073
<b>Totals</b>	<b>33,954</b>	<b>665</b>	<b>901</b>	<b>2,279</b>	<b>165</b>	<b>37,964</b>	<b>31,232</b>	<b>629</b>	<b>736</b>	<b>3,972</b>	<b>244</b>	<b>36,813</b>	<b>74,777</b>
7-10am	3,908	111	163	482	32	4,696	6,615	157	173	1,209	67	8,221	12,917
10am-1pm	3,601	94	154	601	37	4,487	3,926	124	110	992	61	5,213	9,700
1-4pm	4,687	127	201	641	32	5,688	3,927	107	122	717	37	4,910	10,598
4-7pm	6,753	128	179	251	22	7,333	4,128	69	136	389	14	4,736	12,069
7am-7pm	18,949	460	697	1,975	123	22,204	18,596	457	541	3,307	179	23,080	45,284
6-10am	4,980	138	193	549	40	5,900	8,312	209	238	1,490	106	10,355	16,255
3-7pm	8,602	175	269	430	28	9,504	5,530	98	169	530	26	6,353	15,857
6am-7pm	20,021	487	727	2,042	131	23,408	20,293	509	606	3,588	218	25,214	48,622

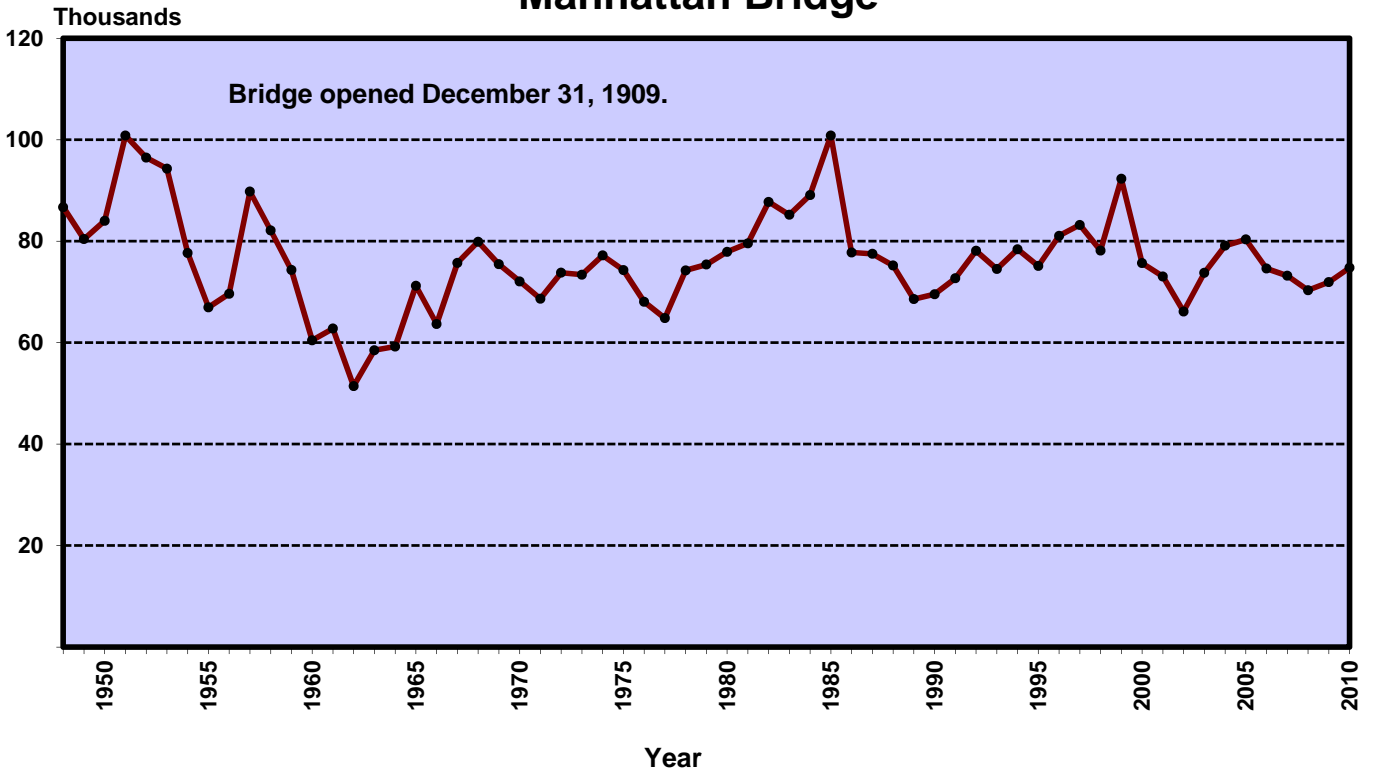
Based on April 2006 Classification Survey Data.

\*\* Peak Volumes

## Hourly Vehicular Volumes Manhattan Bridge ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions Manhattan Bridge



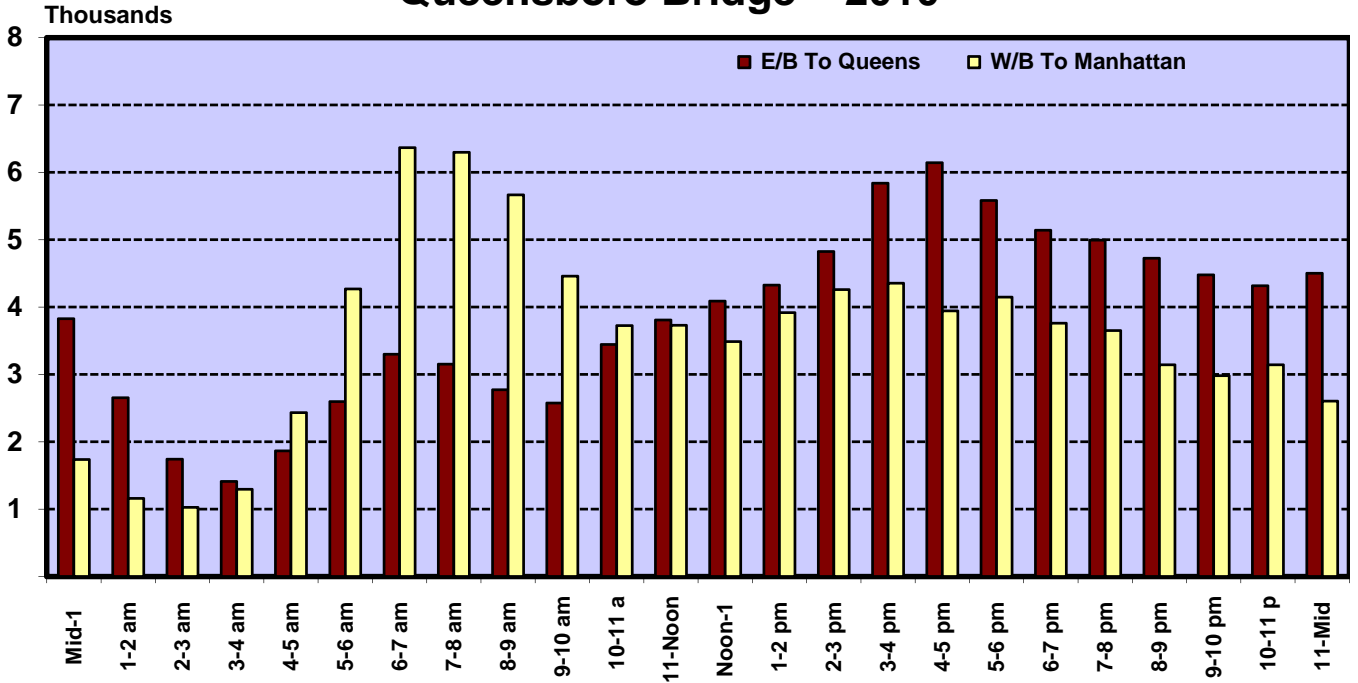
### Hourly Vehicular Volumes Queensboro Bridge - 2010

FHWA Classes ▶	Eastbound to Queens						Westbound to Manhattan						2-Way Grand Totals
	Commuter Vans		Single Unit Trucks	Tractor Trailers	Total Vehicles		Commuter Vans		Single Unit Trucks	Tractor Trailers	Total Vehicles		
	Autos & Motorcycles	Pickups Large SUVs					Buses	Autos & Motorcycles					
	1 & 2	3	4	5 - 7	8 - 13		1 & 2	3	4	5 - 7	8 - 13		
12-1am	3,719	50	16	42	0	3,827	1,703	16	10	8	1	1,738	5,565
1-2am	2,593	24	10	26	1	2,654	1,130	14	5	11	1	1,161	3,815
2-3am	1,696	9	4	31	1	1,741	978	11	4	33	0	1,026	2,767
3-4am	1,356	7	2	47	0	1,412	1,219	8	11	57	1	1,296	2,708
4-5am	1,764	17	15	70	0	1,866	2,257	27	18	130	0	2,432	4,298
5-6am	2,421	40	20	116	1	2,598	3,970	52	25	201	21	4,269	6,867
6-7am	3,053	34	26	187	1	3,301	6,008	78	38	228	14	6,366 **	9,667
7-8am	2,833	56	31	229	4	3,153	5,883	68	50	268	30	6,299	9,452
8-9am	2,449	52	41	225	7	2,774	5,253	73	57	257	26	5,666	8,440
9-10am	2,262	41	39	228	6	2,576	4,110	69	43	203	34	4,459	7,035
10-11am	3,011	65	59	298	12	3,445	3,402	62	31	200	30	3,725	7,170
11-12am	3,429	58	44	273	5	3,809	3,424	57	26	187	36	3,730	7,539
12-1pm	3,669	74	44	297	6	4,090	3,216	36	35	170	32	3,489	7,579
1-2pm	3,860	89	50	321	6	4,326	3,664	51	35	132	37	3,919	8,245
2-3pm	4,392	87	58	282	7	4,826	3,988	67	42	128	34	4,259	9,085
3-4pm	5,395	88	61	287	8	5,839	4,106	50	40	139	21	4,356	10,195 **
4-5pm	5,755	90	45	247	7	6,144 **	3,760	45	28	100	12	3,945	10,089
5-6pm	5,228	73	44	229	10	5,584	3,988	36	34	70	21	4,149	9,733
6-7pm	4,833	64	51	187	6	5,141	3,659	29	21	41	12	3,762	8,903
7-8pm	4,675	81	59	168	10	4,993	3,554	25	27	34	11	3,651	8,644
8-9pm	4,436	83	67	136	4	4,726	3,060	29	19	29	7	3,144	7,870
9-10pm	4,241	65	51	118	3	4,478	2,908	24	15	32	4	2,983	7,461
10-11pm	4,090	59	47	120	1	4,317	3,077	23	18	26	0	3,144	7,461
11-12pm	4,361	56	28	56	1	4,502	2,552	15	15	22	1	2,605	7,107
Totals	85,521	1,362	912	4,220	107	92,122	80,869	965	647	2,706	386	85,573	177,695
7-10am	7,544	149	111	682	17	8,503	15,246	210	150	728	90	16,424	24,927
10am-1pm	10,109	197	147	868	23	11,344	10,042	155	92	557	98	10,944	22,288
1-4pm	13,647	264	169	890	21	14,991	11,758	168	117	399	92	12,534	27,525
4-7pm	15,816	227	140	663	23	16,869	11,407	110	83	211	45	11,856	28,725
7am-7pm	47,116	837	567	3,103	84	51,707	48,453	643	442	1,895	325	51,758	103,465
6-10am	10,597	183	137	869	18	11,804	21,254	288	188	956	104	22,790	34,594
3-7pm	21,211	315	201	950	31	22,708	15,513	160	123	350	66	16,212	38,920
6am-7pm	50,169	871	593	3,290	85	55,008	54,461	721	480	2,123	339	58,124	113,132

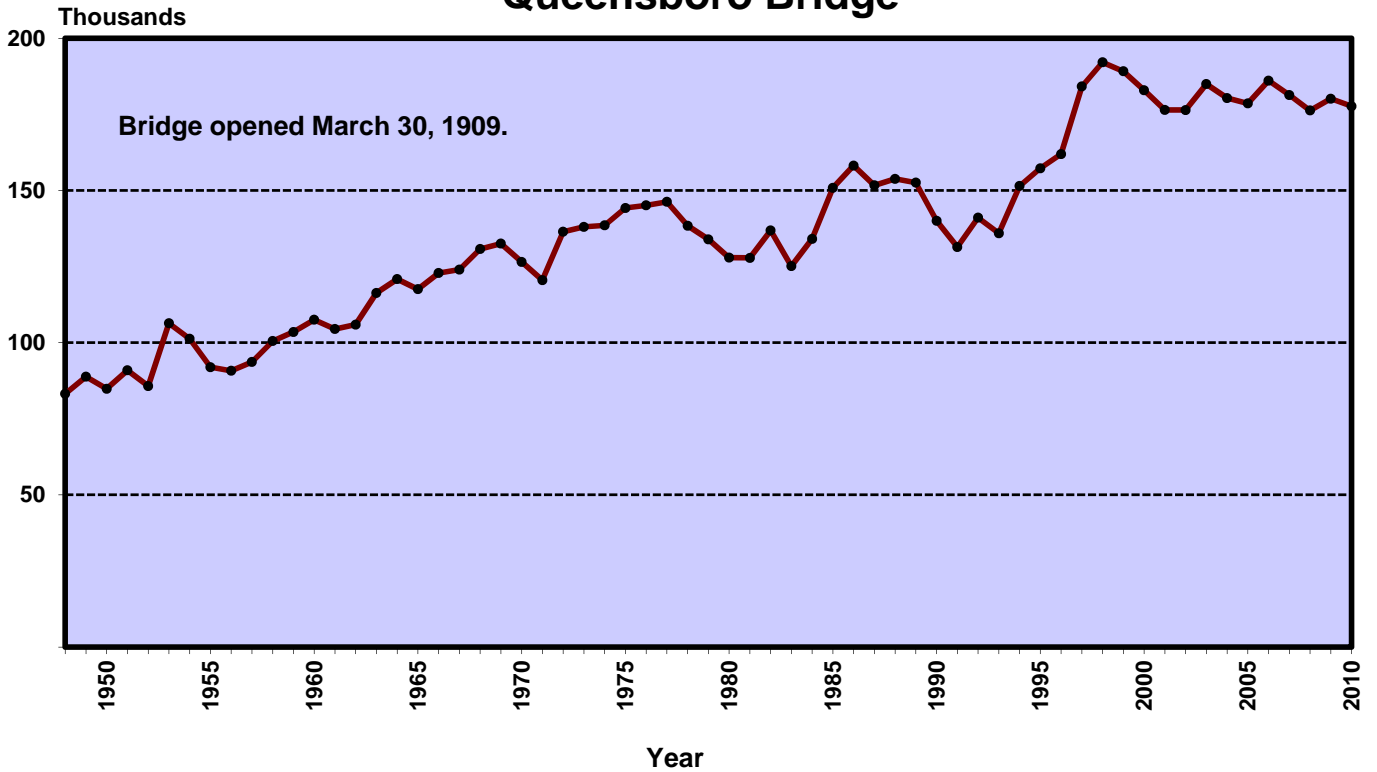
Based on April 2006 Classification Survey Data.

\*\* Peak Volumes

## Hourly Vehicular Volumes Queensboro Bridge ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions Queensboro Bridge



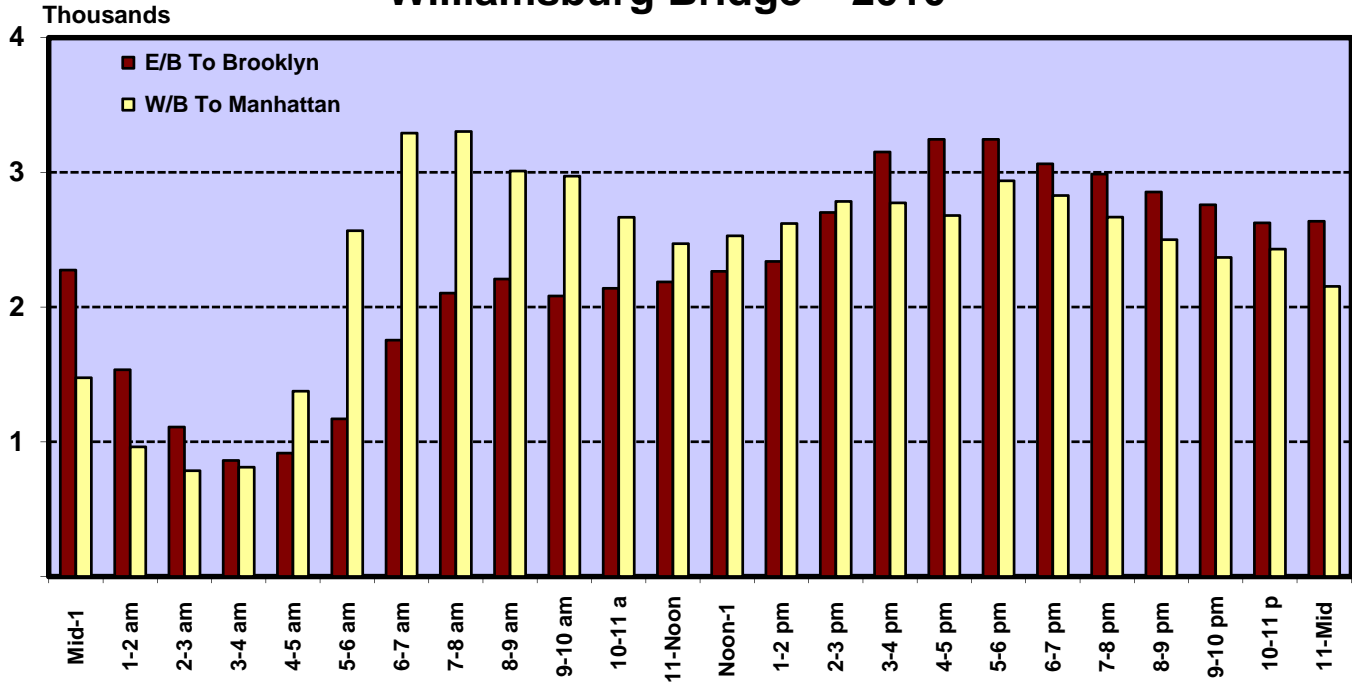
### Hourly Vehicular Volumes Williamsburg Bridge - 2010

FHWA Classes ▶	Eastbound to Brooklyn						Westbound to Manhattan						2-Way Grand Totals
	Commuter Vans		Single Unit Trucks	Tractor Trailers	Total Vehicles		Commuter Vans		Single Unit Trucks	Tractor Trailers	Total Vehicles		
	Autos & Motorcycles	Pickups Large SUVs					Buses	Autos & Motorcycles					
	1 & 2	3	4	5 - 7	8 - 13		1 & 2	3	4	5 - 7	8 - 13		
12-1am	2,265	7	1	2	0	2,275	1,470	4	1	0	0	1,475	3,750
1-2am	1,527	4	1	1	2	1,535	957	3	1	1	0	962	2,497
2-3am	1,099	5	3	2	1	1,110	776	6	1	2	0	785	1,895
3-4am	844	8	4	4	2	862	805	4	0	1	1	811	1,673
4-5am	903	7	3	3	0	916	1,367	6	1	1	1	1,376	2,292
5-6am	1,149	6	9	6	0	1,170	2,548	7	8	2	2	2,567	3,737
6-7am	1,687	13	29	23	3	1,755	3,251	16	17	8	0	3,292	5,047
7-8am	1,992	23	50	38	1	2,104	3,240	31	19	14	0	3,304 **	5,408
8-9am	2,101	24	47	33	3	2,208	2,938	34	21	16	1	3,010	5,218
9-10am	1,968	30	49	34	2	2,083	2,906	29	20	14	3	2,972	5,055
10-11am	1,986	41	68	44	1	2,140	2,604	34	18	8	3	2,667	4,807
11-12am	2,043	35	61	46	2	2,187	2,419	27	16	8	1	2,471	4,658
12-1pm	2,120	58	27	58	2	2,265	2,457	36	17	18	1	2,529	4,794
1-2pm	2,187	67	30	51	4	2,339	2,549	34	20	17	1	2,621	4,960
2-3pm	2,555	58	40	47	3	2,703	2,717	33	16	17	2	2,785	5,488
3-4pm	2,986	68	39	55	3	3,151	2,700	29	21	22	2	2,774	5,925
4-5pm	3,093	61	37	48	6	3,245 **	2,604	37	19	19	1	2,680	5,925
5-6pm	3,117	59	35	33	1	3,245 **	2,851	42	25	18	2	2,938	6,183 **
6-7pm	2,974	39	25	24	2	3,064	2,758	34	17	17	2	2,828	5,892
7-8pm	2,911	31	25	20	1	2,988	2,613	27	16	12	0	2,668	5,656
8-9pm	2,793	25	20	14	2	2,854	2,476	15	5	4	1	2,501	5,355
9-10pm	2,725	14	13	5	2	2,759	2,347	14	4	3	1	2,369	5,128
10-11pm	2,604	11	4	4	2	2,625	2,410	14	2	3	1	2,430	5,055
11-12pm	2,625	7	2	3	0	2,637	2,142	8	2	2	0	2,154	4,791
Totals	52,254	701	622	598	45	54,220	55,905	524	287	227	26	56,969	111,189
7-10am	6,061	77	146	105	6	6,395	9,084	94	60	44	4	9,286	15,681
10am-1pm	6,149	134	156	148	5	6,592	7,480	97	51	34	5	7,667	14,259
1-4pm	7,728	193	109	153	10	8,193	7,966	96	57	56	5	8,180	16,373
4-7pm	9,184	159	97	105	9	9,554	8,213	113	61	54	5	8,446	18,000
7am-7pm	29,122	563	508	511	30	30,734	32,743	400	229	188	19	33,579	64,313
6-10am	7,748	90	175	128	9	8,150	12,335	110	77	52	4	12,578	20,728
3-7pm	12,170	227	136	160	12	12,705	10,913	142	82	76	7	11,220	23,925
6am-7pm	30,809	576	537	534	33	32,489	35,994	416	246	196	19	36,871	69,360

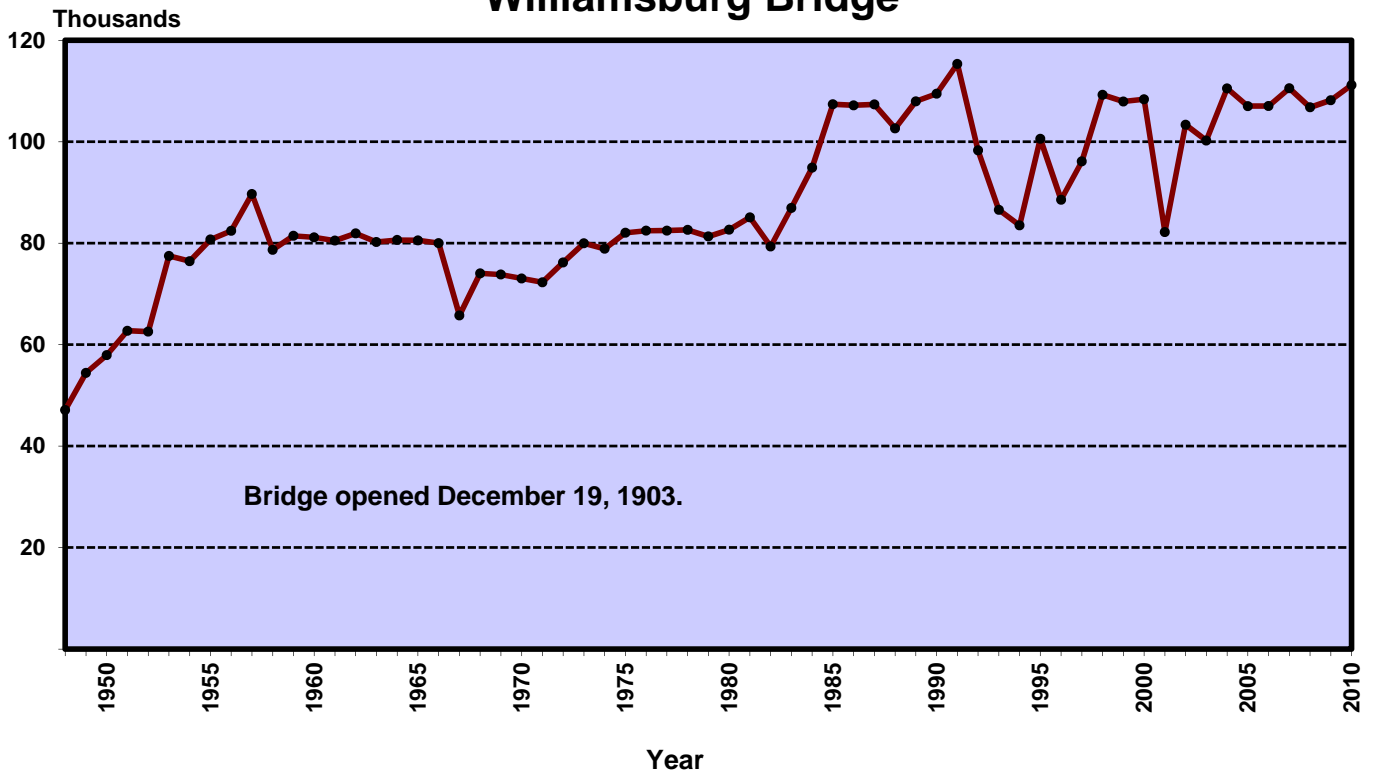
Based on March 2006 Classification Survey Data.

\*\* Peak Volumes

## Hourly Vehicular Volumes Williamsburg Bridge ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions Williamsburg Bridge







# Harlem River Bridges



**Willis Avenue Bridge**

**Harlem River Bridges**  
**Average Daily Traffic Volumes**  
**1948 - 2010**

<b>Year</b>	<b>Alexander Hamilton</b>	<b>Broadway</b>	<b>Macombs Dam</b>	<b>Madison Avenue</b>	<b>Third Avenue</b>
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	<i>Bridge Opened Jan. 1963</i>	16,374	31,072	33,576	51,478
1952		17,412	36,100	27,468	34,023
1953		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		25,491	48,720	27,967	56,525
1960		23,025	50,865	22,541	68,079
1961		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	158,710	26,465	33,539	29,832	52,969
1978	151,342	25,145	35,764	34,938	54,177
1979	143,973	27,673	37,145	29,036	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	175,279	42,555	41,571	22,739	68,663
1996	176,856	40,040	40,031	17,948	67,206
1997	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
2003	182,704	36,888	42,254	41,575	43,065
2004	175,323	35,190	40,558	48,723	47,053
2005	181,566	35,698	40,112	48,397	60,152
2006	190,183	33,551	39,878	43,805	61,874
2007	192,651	35,523	40,749	44,663	59,712
2008	189,598	33,266	38,897	41,740	58,510
2009	191,646	35,566	39,508	43,480	59,039
2010	192,213	37,292	39,627	42,966	60,549

**Harlem River Bridges (cont'd)**  
**Average Daily Traffic Volumes**  
**1948 - 2010**

<i>Year</i>	<i>University Heights</i>	<i>Washington</i>	<i>Willis Avenue</i>	<i>145th Street</i>	<i>Totals</i>
1948	21,706	29,374	29,648	18,196	207,177
1949	14,098	32,122	42,772	25,908	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	36,763	54,008	59,050	30,868	345,199
1961	43,749	61,542	50,902	33,767	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	29,128	38,185	52,484	20,888	442,200
1978	35,883	37,690	54,335	21,484	450,758
1979	31,796	37,348	44,851	21,566	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	38,895	52,795	70,472	25,390	542,306
1994	38,134	57,009	67,344	23,299	526,044
1995	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
2005	44,938	58,019	66,708	25,802	561,392
2006	42,118	57,689	66,212	21,733	557,043
2007	41,422	56,945	65,113	21,147	557,925
2008	39,340	52,768	62,167	23,148	539,434
2009	39,165	52,420	58,548	24,364	543,736
2010	39,230	52,014	56,934	28,749	549,574

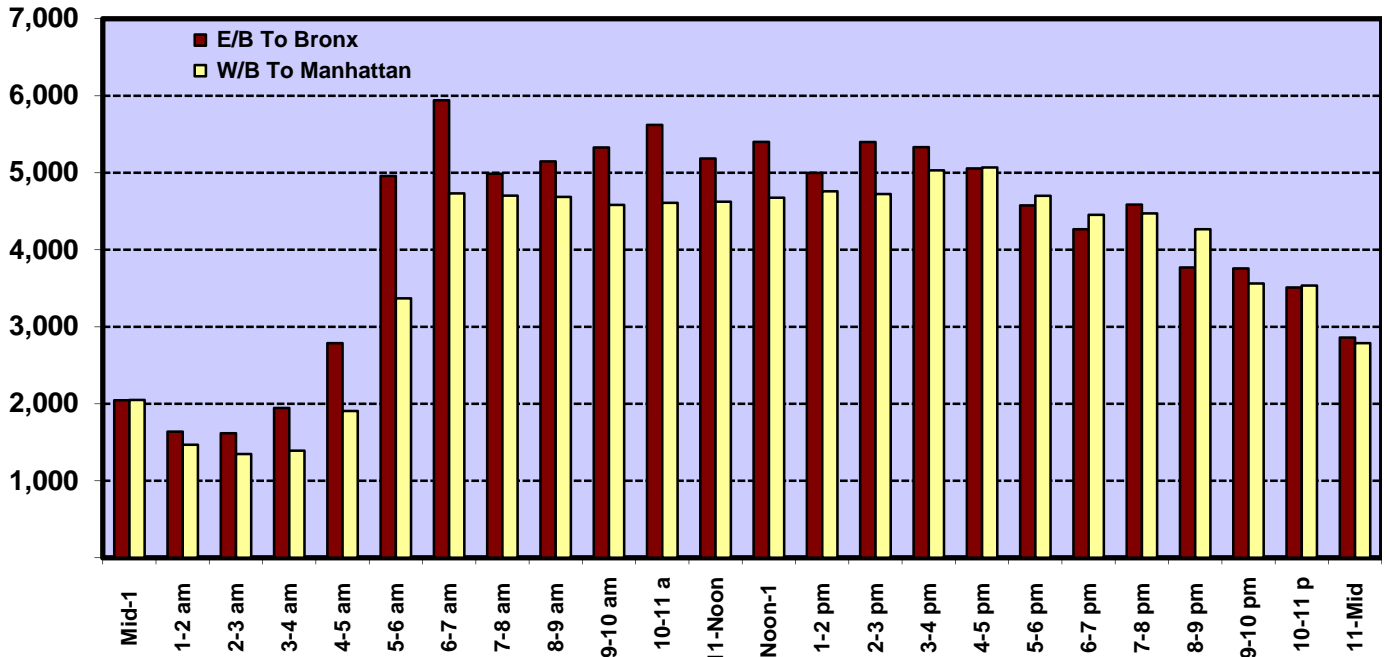
### Hourly Vehicular Volumes Alexander Hamilton Bridge - 2010

	<b>Eastbound to Bronx</b>						<b>Westbound to Manhattan</b>						<b>2-Way Totals</b>
	Autos	Buses	Commuter Vans	Commercial Trucks	Vans	Totals	Autos	Buses	Commuter Vans	Commercial Trucks	Vans	Totals	
12-1am	---	---	---	---	---	2,045	---	---	---	---	---	2,050	4,095
1-2am	---	---	---	---	---	1,638	---	---	---	---	---	1,467	3,105
2-3am	---	---	---	---	---	1,618	---	---	---	---	---	1,347	2,965
3-4am	---	---	---	---	---	1,945	---	---	---	---	---	1,390	3,335
4-5am	---	---	---	---	---	2,788	---	---	---	---	---	1,907	4,695
5-6am	---	---	---	---	---	4,958	---	---	---	---	---	3,368	8,326
6-7am	---	---	---	---	---	5,942 **	---	---	---	---	---	4,732	10,674 **
7-8am	3,893	13	225	744	113	4,988	3,977	9	85	423	209	4,703	9,691
8-9am	3,740	5	244	940	218	5,147	4,008	33	33	465	148	4,687	9,834
9-10am	3,729	5	239	1,221	134	5,328	3,523	51	29	773	206	4,582	9,910
10-11am	5,044	4	120	395	57	5,620	3,989	28	18	430	145	4,610	10,230
11-12am	3,887	12	279	864	143	5,185	3,276	14	21	1,022	291	4,624	9,809
12-1pm	4,683	0	132	528	58	5,401	3,962	11	10	553	140	4,676	10,077
1-2pm	3,809	8	181	909	91	4,998	3,554	13	25	924	242	4,758	9,756
2-3pm	4,179	7	222	867	123	5,398	3,526	20	43	945	190	4,724	10,122
3-4pm	4,753	8	96	371	104	5,332	4,379	24	18	515	94	5,030	10,362
4-5pm	4,239	6	159	530	121	5,055	3,824	4	44	964	233	5,069 **	10,124
5-6pm	3,991	5	112	375	93	4,576	3,686	2	30	822	161	4,701	9,277
6-7pm	3,587	8	188	411	73	4,267	3,831	3	22	464	133	4,453	8,720
7-8pm	---	---	---	---	---	4,586	---	---	---	---	---	4,472	9,058
8-9pm	---	---	---	---	---	3,769	---	---	---	---	---	4,266	8,035
9-10pm	---	---	---	---	---	3,757	---	---	---	---	---	3,563	7,320
10-11pm	---	---	---	---	---	3,511	---	---	---	---	---	3,536	7,047
11-12pm	---	---	---	---	---	2,859	---	---	---	---	---	2,787	5,646
Totals	---	---	---	---	---	100,711	---	---	---	---	---	91,502	192,213
7-10am	11,362	23	708	2,905	465	15,463	11,508	93	147	1,661	563	13,972	29,435
10am-1pm	13,614	16	531	1,787	258	16,206	11,227	53	49	2,005	576	13,910	30,116
1-4pm	12,741	23	499	2,147	318	15,728	11,459	57	86	2,384	526	14,512	30,240
4-7pm	11,817	19	459	1,316	287	13,898	11,341	9	96	2,250	527	14,223	28,121
7am-7pm	49,534	81	2,197	8,155	1,328	61,295	45,535	212	378	8,300	2,192	56,617	117,912
6-10am	---	---	---	---	---	21,405	---	---	---	---	---	18,704	40,109
3-7pm	16,570	27	555	1,687	391	19,230	15,720	33	114	2,765	621	19,253	38,483
6am-7pm	---	---	---	---	---	67,237	---	---	---	---	---	61,349	128,586

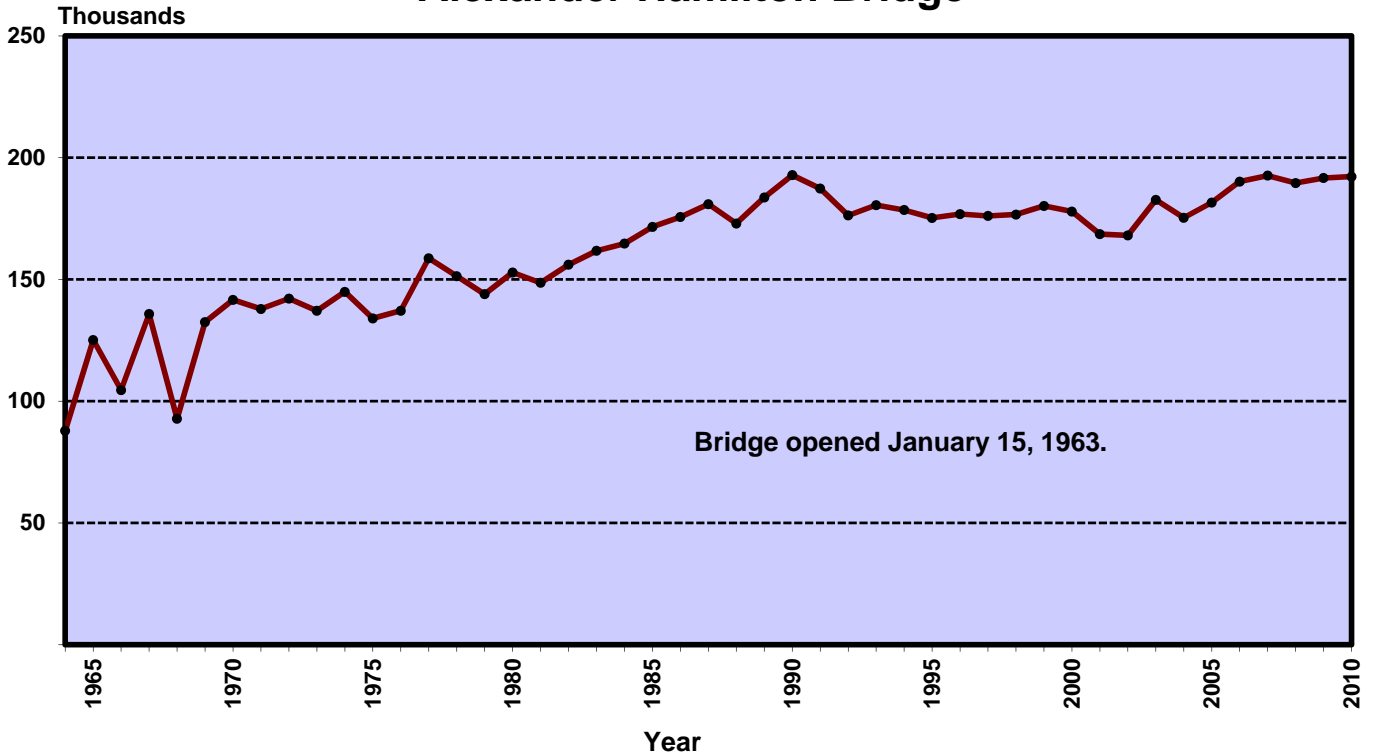
Based on 1989 Classification Survey Data

\*\* Peak Volumes

## Hourly Vehicular Volumes Alexander Hamilton Bridge ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions Alexander Hamilton Bridge



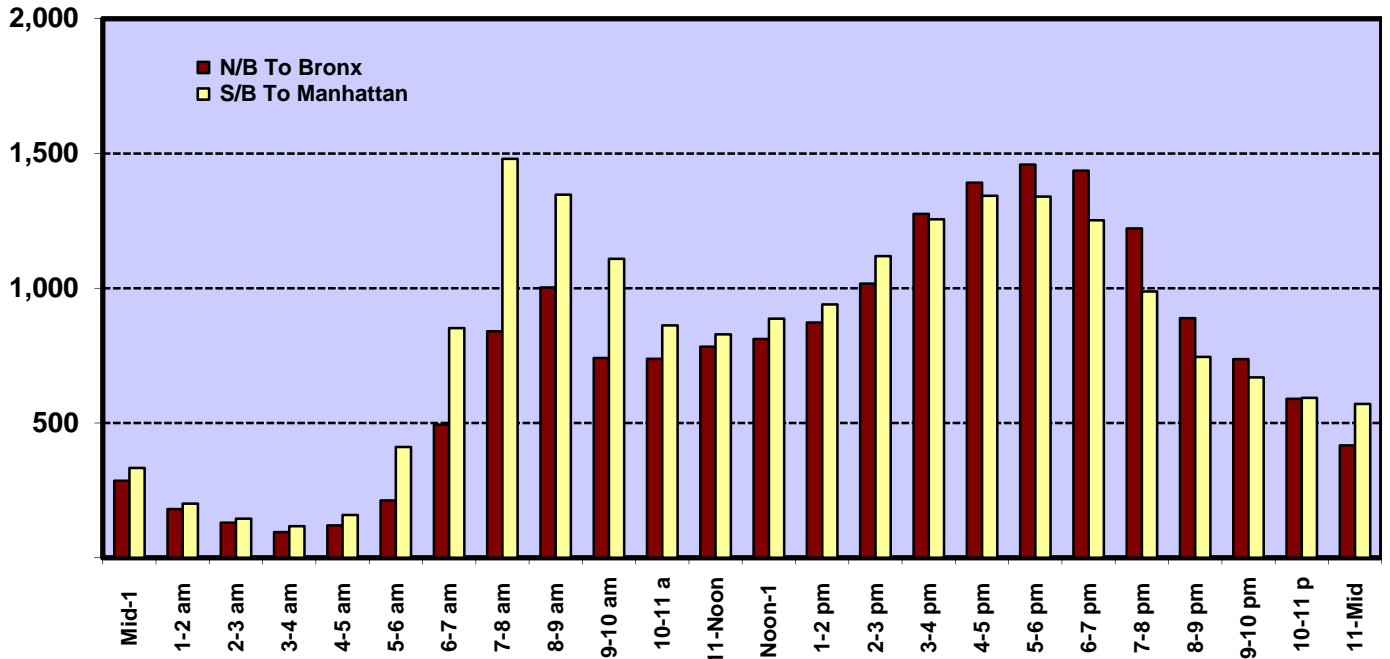
## Hourly Vehicular Volumes Broadway Bridge - 2010

	<b>Northbound to Bronx</b>						<b>Southbound to Manhattan</b>						<b>2-Way Totals</b>
	Autos	Buses	Commuter Vans	Commercial Trucks	Vans	Totals	Autos	Buses	Commuter Vans	Commercial Trucks	Vans	Totals	
12-1am	---	---	---	---	---	286	---	---	---	---	---	333	619
1-2am	---	---	---	---	---	181	---	---	---	---	---	201	382
2-3am	---	---	---	---	---	130	---	---	---	---	---	145	275
3-4am	---	---	---	---	---	95	---	---	---	---	---	117	212
4-5am	---	---	---	---	---	120	---	---	---	---	---	159	279
5-6am	---	---	---	---	---	213	---	---	---	---	---	411	624
6-7am	---	---	---	---	---	494	---	---	---	---	---	852	1,346
7-8am	684	38	20	69	29	840	1,306	60	41	30	43	1,480 **	2,320
8-9am	853	62	22	37	29	1,003	1,195	41	28	42	41	1,347	2,350
9-10am	633	22	3	26	57	741	947	36	27	56	43	1,109	1,850
10-11am	663	16	2	34	23	738	785	21	11	36	9	862	1,600
11-12am	683	21	9	28	42	783	686	23	23	48	49	829	1,612
12-1pm	741	21	6	21	23	812	834	21	4	17	11	887	1,699
1-2pm	791	24	3	27	28	873	871	24	9	20	16	940	1,813
2-3pm	879	25	1	37	75	1,017	1,010	31	24	36	18	1,119	2,136
3-4pm	1,182	29	10	15	40	1,276	1,179	33	14	19	11	1,256	2,532
4-5pm	1,233	43	30	26	60	1,392	1,214	32	22	38	37	1,343	2,735
5-6pm	1,336	31	9	13	70	1,459 **	1,233	31	32	19	25	1,340	2,799 **
6-7pm	1,273	24	0	14	125	1,436	1,164	31	28	20	9	1,252	2,688
7-8pm	---	---	---	---	---	1,222	---	---	---	---	---	988	2,210
8-9pm	---	---	---	---	---	889	---	---	---	---	---	745	1,634
9-10pm	---	---	---	---	---	737	---	---	---	---	---	669	1,406
10-11pm	---	---	---	---	---	590	---	---	---	---	---	593	1,183
11-12pm	---	---	---	---	---	417	---	---	---	---	---	571	988
Totals	---	---	---	---	---	17,744	---	---	---	---	---	19,548	37,292
7-10am	2,170	122	45	132	115	2,584	3,448	137	96	128	127	3,936	6,520
10am-1pm	2,087	58	17	83	88	2,333	2,305	65	38	101	69	2,578	4,911
1-4pm	2,852	78	14	79	143	3,166	3,060	88	47	75	45	3,315	6,481
4-7pm	3,842	98	39	53	255	4,287	3,611	94	82	77	71	3,935	8,222
7am-7pm	10,951	356	115	347	601	12,370	12,424	384	263	381	312	13,764	26,134
6-10am	---	---	---	---	---	3,078	---	---	---	---	---	4,788	7,866
3-7pm	5,024	127	49	68	295	5,563	4,790	127	96	96	82	5,191	10,754
6am-7pm	---	---	---	---	---	12,864	---	---	---	---	---	14,616	27,480

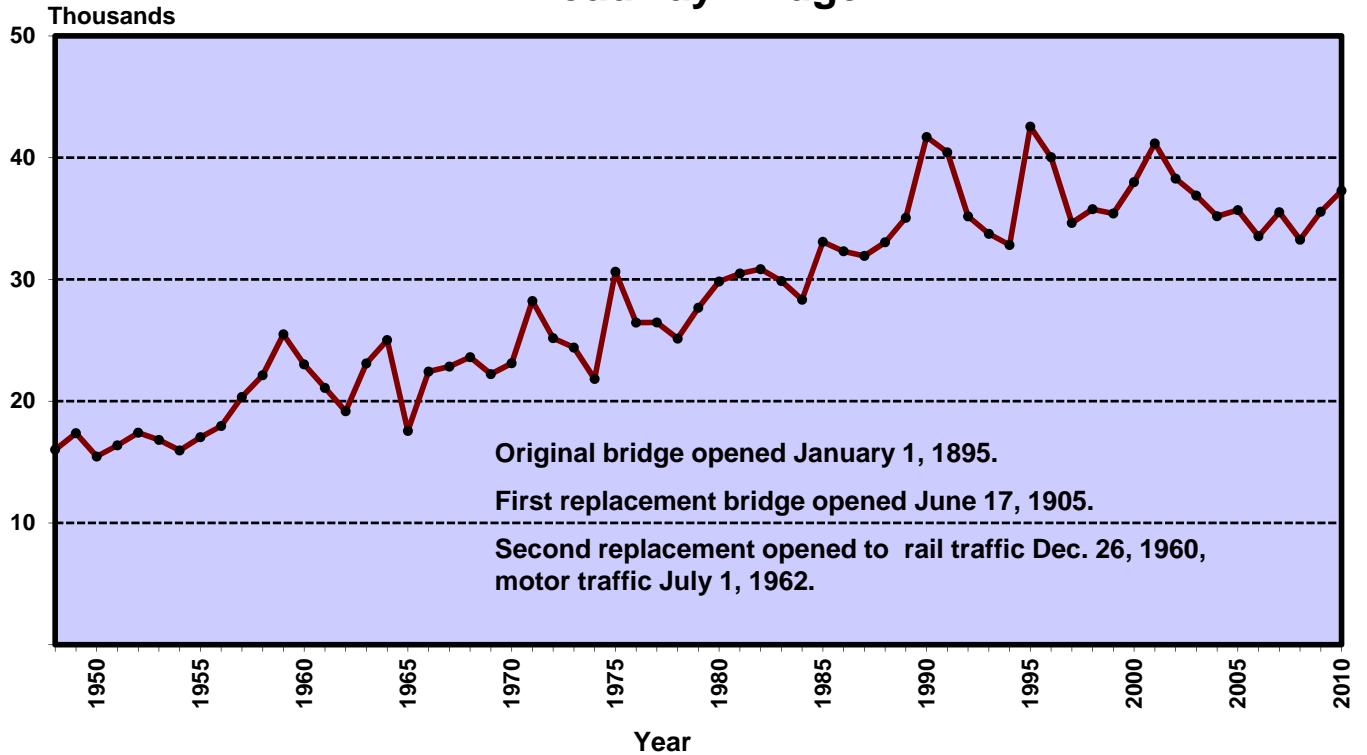
Based on 1989 Classification Survey Data

\*\* Peak Volumes

## Hourly Vehicular Volumes Broadway Bridge ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions Broadway Bridge



## Hourly Vehicular Volumes Macombs Dam Bridge - 2010

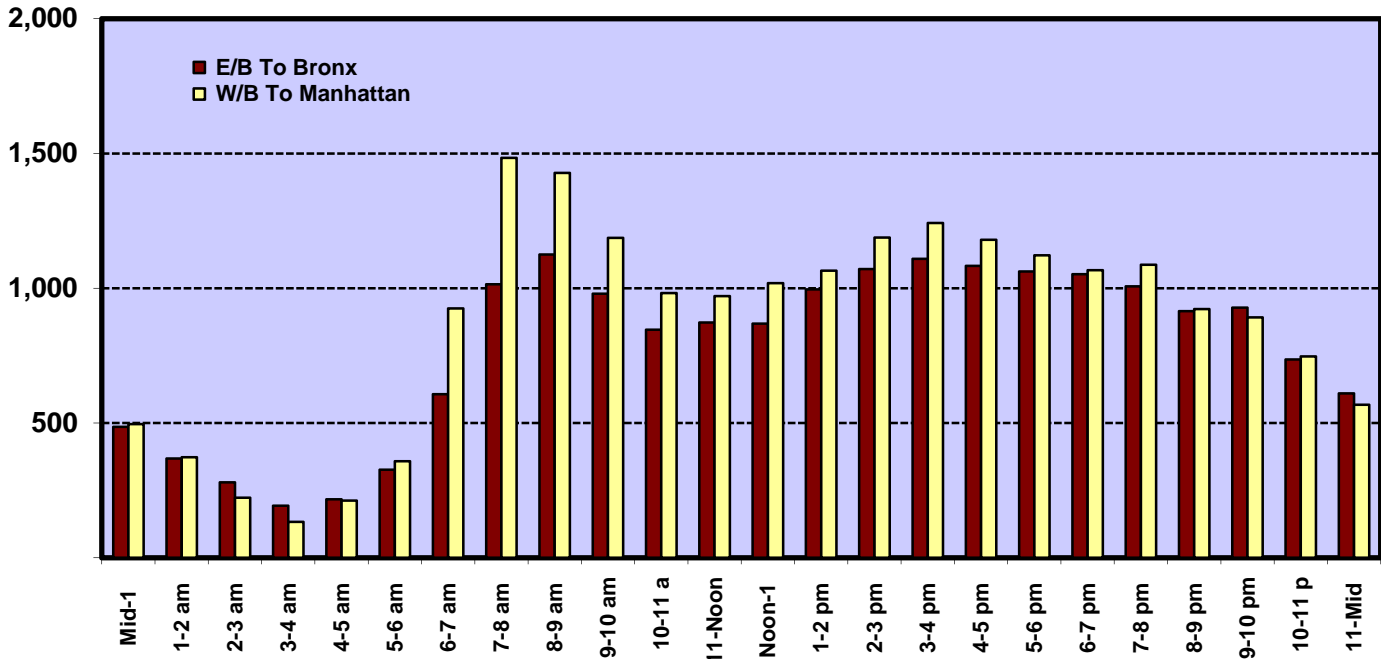
	<b>Eastbound to Bronx</b>						<b>Westbound to Manhattan</b>						<b>2-Way Totals</b>
	Autos	Buses	Commuter Vans	Commercial Trucks	Vans	Totals	Autos	Buses	Commuter Vans	Commercial Trucks	Vans	Totals	
12-1am	---	---	---	---	---	486	---	---	---	---	---	496	982
1-2am	---	---	---	---	---	368	---	---	---	---	---	373	741
2-3am	---	---	---	---	---	280	---	---	---	---	---	223	503
3-4am	---	---	---	---	---	193	---	---	---	---	---	133	326
4-5am	---	---	---	---	---	217	---	---	---	---	---	212	429
5-6am	---	---	---	---	---	327	---	---	---	---	---	358	685
6-7am	---	---	---	---	---	607	---	---	---	---	---	925	1,532
7-8am	832	34	22	51	76	1,015	1,144	37	5	81	217	1,484	** 2,499
8-9am	941	13	17	57	97	1,125	** 1,161	10	2	91	164	1,428	** 2,553
9-10am	839	18	14	53	56	980	887	18	12	102	168	1,187	2,167
10-11am	764	7	3	32	40	846	876	8	7	38	53	982	1,828
11-12am	721	9	12	60	71	873	803	6	13	70	79	971	1,844
12-1pm	793	9	6	26	35	869	939	17	3	19	41	1,019	1,888
1-2pm	932	3	6	29	26	996	943	19	7	20	76	1,065	2,061
2-3pm	889	14	22	70	76	1,071	1,014	22	15	50	87	1,188	2,259
3-4pm	966	20	9	52	62	1,109	1,134	35	10	21	42	1,242	2,351
4-5pm	841	7	27	72	136	1,083	1,037	9	28	37	69	1,180	2,263
5-6pm	892	8	12	32	118	1,062	1,029	11	9	17	56	1,122	2,184
6-7pm	981	3	6	23	39	1,052	956	6	11	21	73	1,067	2,119
7-8pm	---	---	---	---	---	1,007	---	---	---	---	---	1,087	2,094
8-9pm	---	---	---	---	---	915	---	---	---	---	---	923	1,838
9-10pm	---	---	---	---	---	928	---	---	---	---	---	892	1,820
10-11pm	---	---	---	---	---	736	---	---	---	---	---	747	1,483
11-12pm	---	---	---	---	---	610	---	---	---	---	---	568	1,178
Totals	---	---	---	---	---	18,755	---	---	---	---	---	20,872	39,627
7-10am	2,612	65	53	161	229	3,120	3,192	65	19	274	549	4,099	7,219
10am-1pm	2,278	25	21	118	146	2,588	2,618	31	23	127	173	2,972	5,560
1-4pm	2,787	37	37	151	164	3,176	3,091	76	32	91	205	3,495	6,671
4-7pm	2,714	18	45	127	293	3,197	3,022	26	48	75	198	3,369	6,566
7am-7pm	10,391	145	156	557	832	12,081	11,923	198	122	567	1,125	13,935	26,016
6-10am	---	---	---	---	---	3,727	---	---	---	---	---	5,024	8,751
3-7pm	3,680	38	54	179	355	4,306	4,156	61	58	96	240	4,611	8,917
6am-7pm	---	---	---	---	---	12,688	---	---	---	---	---	14,860	27,548

Based on 1989 Classification Survey Data

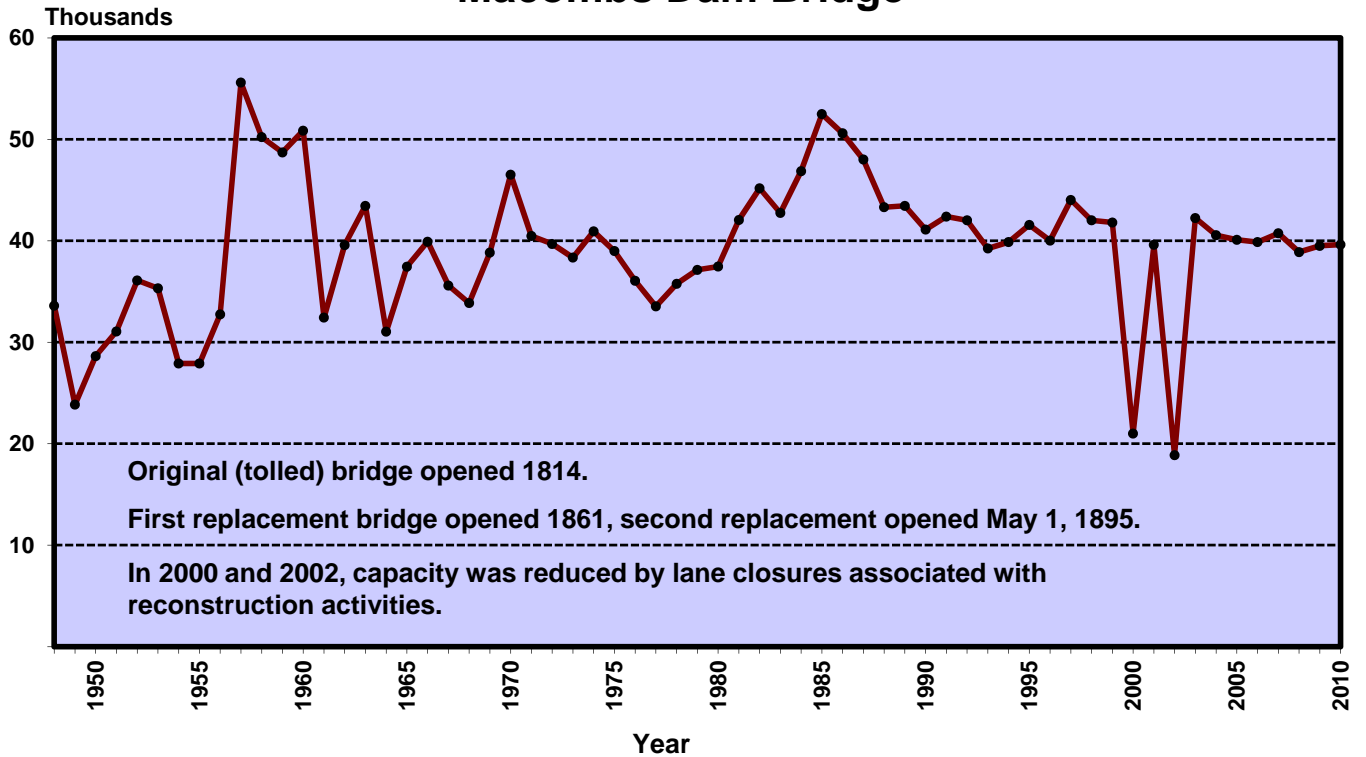
\*\* Peak Volumes



## Hourly Vehicular Volumes Macombs Dam Bridge ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions Macombs Dam Bridge



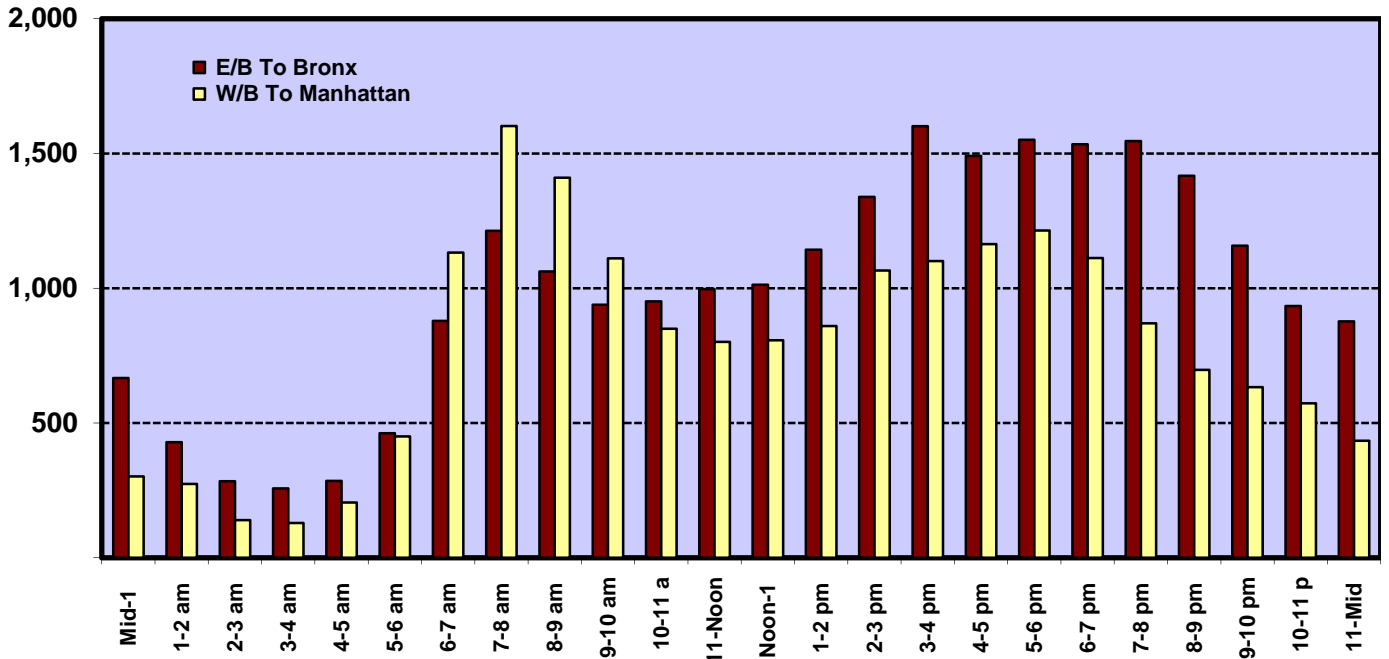
## Hourly Vehicular Volumes Madison Avenue Bridge - 2010

	<i>Eastbound to Bronx</i>						<i>Westbound to Manhattan</i>						<b>2-Way Totals</b>
	Autos	Buses	Commuter Vans	Commercial Trucks	Commercial Vans	Totals	Autos	Buses	Commuter Vans	Commercial Trucks	Commercial Vans	Totals	
12-1am	---	---	---	---	---	667	---	---	---	---	---	302	969
1-2am	---	---	---	---	---	429	---	---	---	---	---	274	703
2-3am	---	---	---	---	---	284	---	---	---	---	---	140	424
3-4am	---	---	---	---	---	257	---	---	---	---	---	129	386
4-5am	---	---	---	---	---	285	---	---	---	---	---	205	490
5-6am	---	---	---	---	---	462	---	---	---	---	---	450	912
6-7am	---	---	---	---	---	879	---	---	---	---	---	1,132	2,011
7-8am	945	47	104	61	56	1,213	1,311	105	15	53	118	1,602	** 2,815 **
8-9am	832	57	74	44	55	1,062	1,117	93	26	59	115	1,410	2,472
9-10am	675	60	87	72	45	939	784	56	31	136	104	1,111	2,050
10-11am	789	36	47	35	44	951	692	58	19	19	62	850	1,801
11-12am	673	27	88	109	100	997	610	23	31	60	77	801	1,798
12-1pm	865	28	34	42	44	1,013	677	30	23	28	49	807	1,820
1-2pm	970	34	36	49	54	1,143	732	50	25	14	39	860	2,003
2-3pm	977	37	86	119	120	1,339	851	72	29	32	82	1,066	2,405
3-4pm	1,379	28	44	78	72	1,601	** 948	66	19	25	43	1,101	2,702
4-5pm	1,111	28	125	103	124	1,491	1,007	62	27	24	44	1,164	2,655
5-6pm	1,240	34	107	87	83	1,551	1,064	48	34	27	41	1,214	2,765
6-7pm	1,263	73	50	64	84	1,534	1,008	40	23	20	21	1,112	2,646
7-8pm	---	---	---	---	---	1,546	---	---	---	---	---	870	2,416
8-9pm	---	---	---	---	---	1,417	---	---	---	---	---	697	2,114
9-10pm	---	---	---	---	---	1,158	---	---	---	---	---	633	1,791
10-11pm	---	---	---	---	---	934	---	---	---	---	---	573	1,507
11-12pm	---	---	---	---	---	877	---	---	---	---	---	434	1,311
Totals	---	---	---	---	---	24,029	---	---	---	---	---	18,937	42,966
7-10am	2,452	164	265	177	156	3,214	3,212	254	72	248	337	4,123	7,337
10am-1pm	2,327	91	169	186	188	2,961	1,979	111	73	107	188	2,458	5,419
1-4pm	3,326	99	166	246	246	4,083	2,531	188	73	71	164	3,027	7,110
4-7pm	3,614	135	282	254	291	4,576	3,079	150	84	71	106	3,490	8,066
7am-7pm	11,719	489	882	863	881	14,834	10,801	703	302	497	795	13,098	27,932
6-10am	---	---	---	---	---	4,093	---	---	---	---	---	5,255	9,348
3-7pm	4,993	163	326	332	363	6,177	4,027	216	103	96	149	4,591	10,768
6am-7pm	---	---	---	---	---	15,713	---	---	---	---	---	14,230	29,943

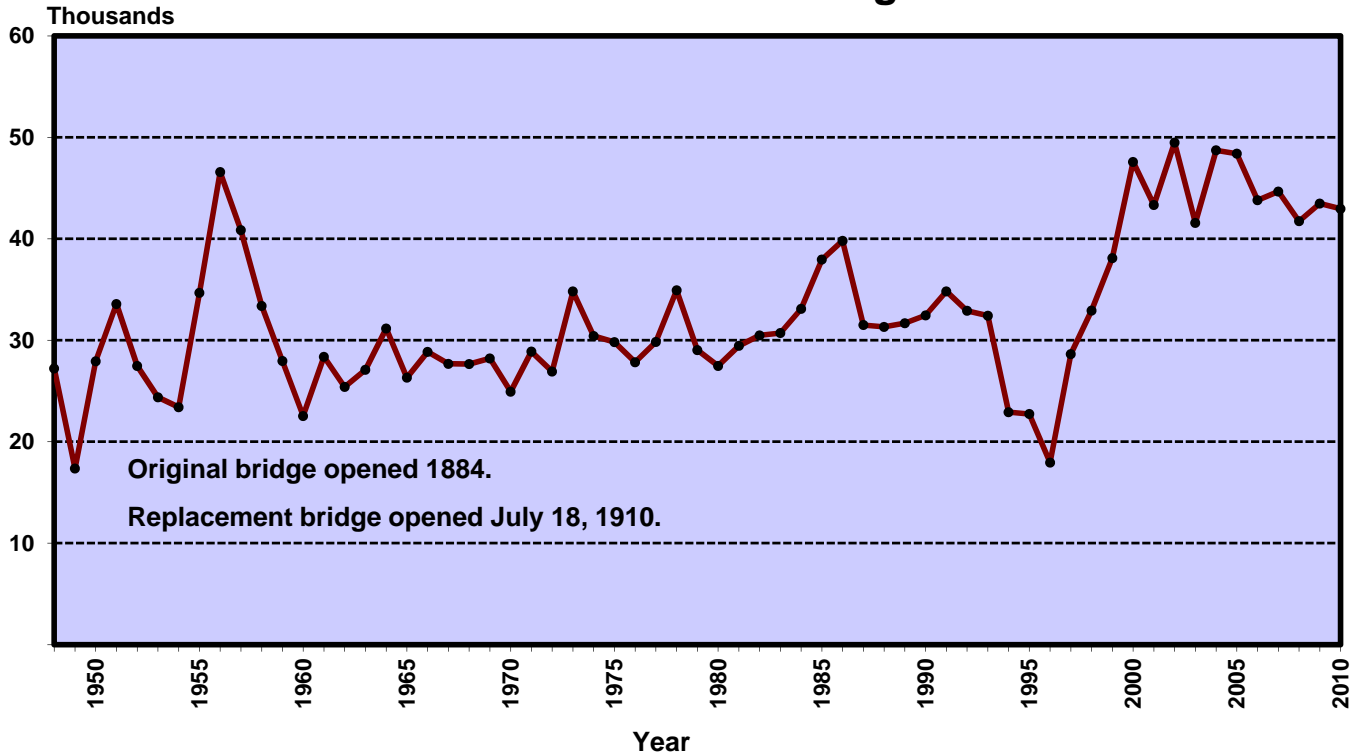
Based on 1989 Classification Survey Data

\*\* Peak Volumes

## Hourly Vehicular Volumes Madison Avenue Bridge ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions Madison Avenue Bridge



**Hourly Vehicular Volumes  
Third Avenue Bridge - 2010**

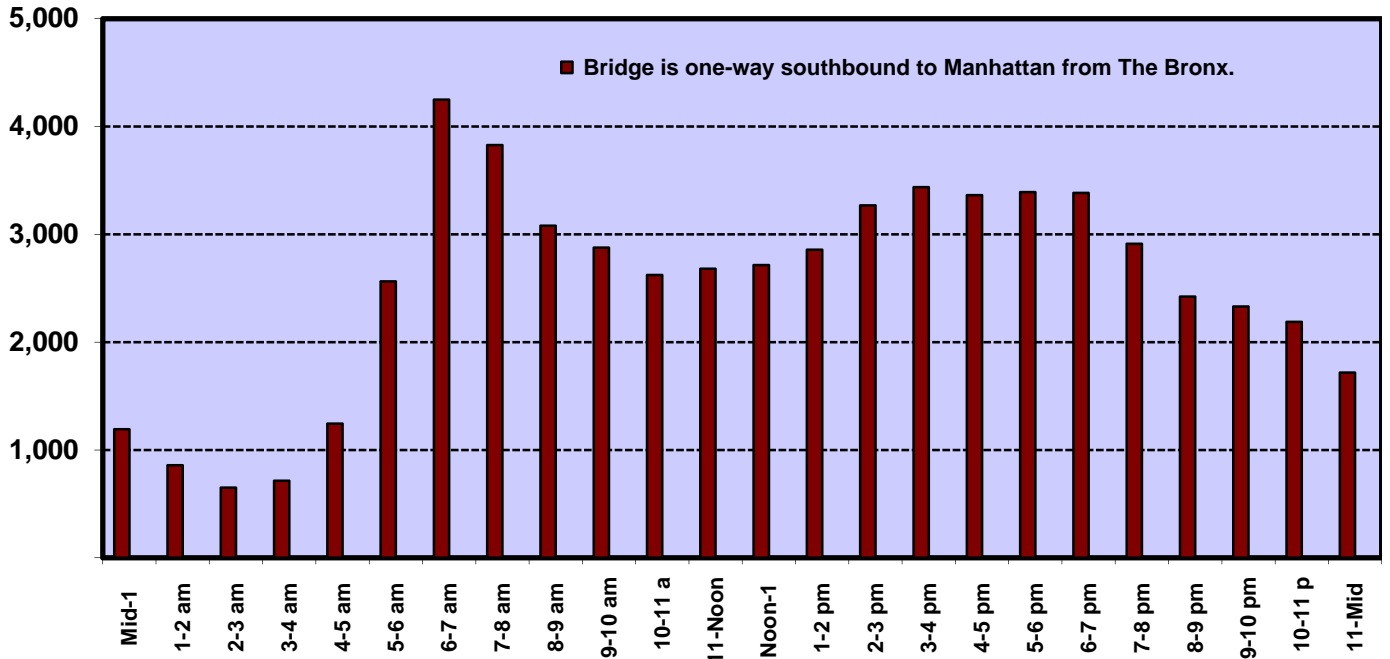
	<b>Northbound to Bronx</b>						<b>Southbound to Manhattan</b>						<b>2-Way Totals</b>
	Autos	Buses	Commuter Vans	Commercial Trucks	Vans	Totals	Autos	Buses	Commuter Vans	Commercial Trucks	Vans	Totals	
12-1am							---	---	---	---	---	1,192	1,192
1-2am							---	---	---	---	---	858	858
2-3am							---	---	---	---	---	650	650
3-4am							---	---	---	---	---	714	714
4-5am							---	---	---	---	---	1,245	1,245
5-6am							---	---	---	---	---	2,564	2,564
6-7am							---	---	---	---	---	4,249 **	4,249 **
7-8am							2,461	51	380	513	423	3,828	3,828
8-9am							2,018	29	200	408	425	3,080	3,080
9-10am							1,922	31	253	374	296	2,876	2,876
10-11am							2,194	27	145	141	116	2,623	2,623
11-12am							1,786	50	290	343	212	2,681	2,681
12-1pm							2,293	69	118	133	102	2,715	2,715
1-2pm							2,134	97	186	163	278	2,858	2,858
2-3pm							2,267	113	283	278	327	3,268	3,268
3-4pm							3,078	91	106	86	77	3,438	3,438
4-5pm							2,830	65	153	146	169	3,363	3,363
5-6pm							3,014	59	125	105	89	3,392	3,392
6-7pm							3,028	61	123	82	90	3,384	3,384
7-8pm							---	---	---	---	---	2,912	2,912
8-9pm							---	---	---	---	---	2,423	2,423
9-10pm							---	---	---	---	---	2,330	2,330
10-11pm							---	---	---	---	---	2,188	2,188
11-12pm							---	---	---	---	---	1,718	1,718
Totals							---	---	---	---	---	60,549	60,549
7-10am							6,401	111	833	1,295	1,144	9,784	9,784
10am-1pm							6,273	146	553	617	430	8,019	8,019
1-4pm							7,479	301	575	527	682	9,564	9,564
4-7pm							8,872	185	401	333	348	10,139	10,139
7am-7pm							29,025	743	2,362	2,772	2,604	37,506	37,506
6-10am							---	---	---	---	---	14,033	14,033
3-7pm							11,950	276	507	419	425	13,577	13,577
6am-7pm							---	---	---	---	---	41,755	41,755

**Bridge is 1-way southbound  
to Manhattan**

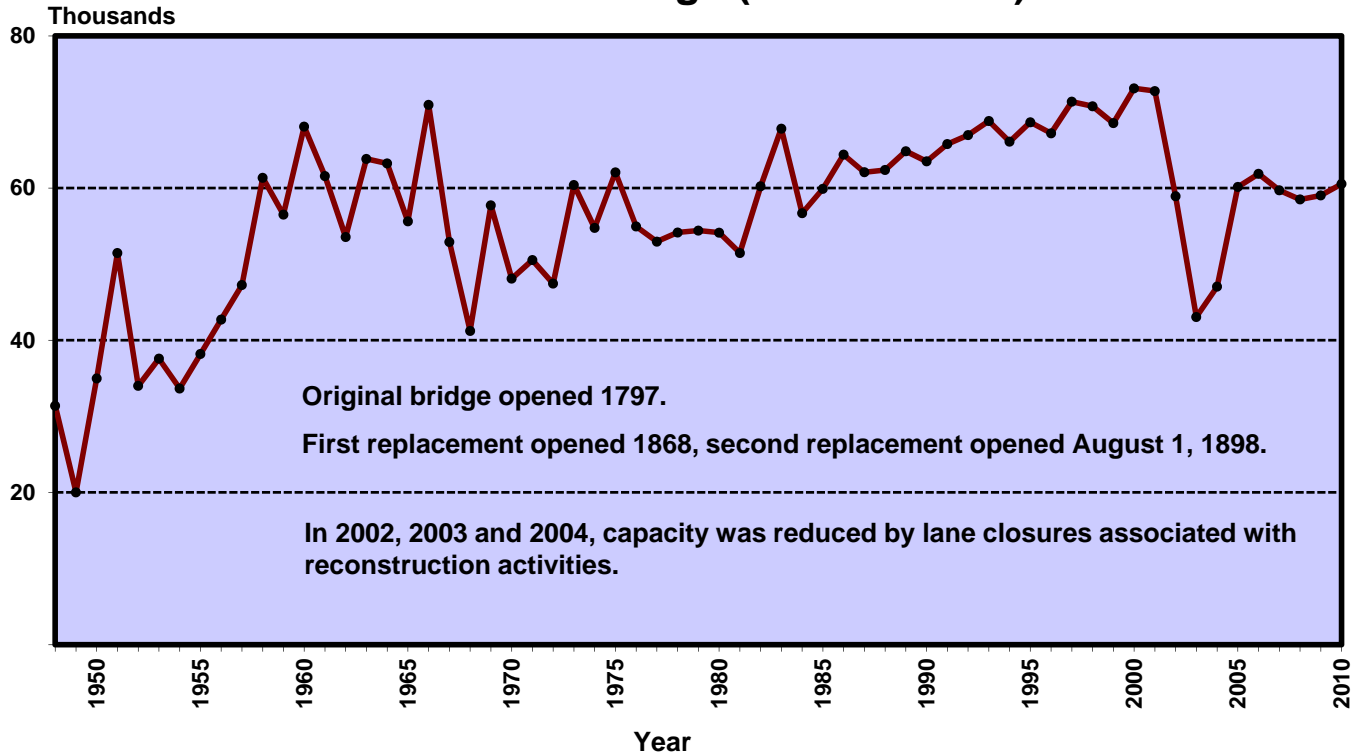
Based on 1989 Classification Survey Data

\*\* Peak Volumes

## Hourly Vehicular Volumes Third Avenue Bridge (Harlem River) ~ 2010



## Average Daily Traffic Volumes Third Avenue Bridge (Harlem River)



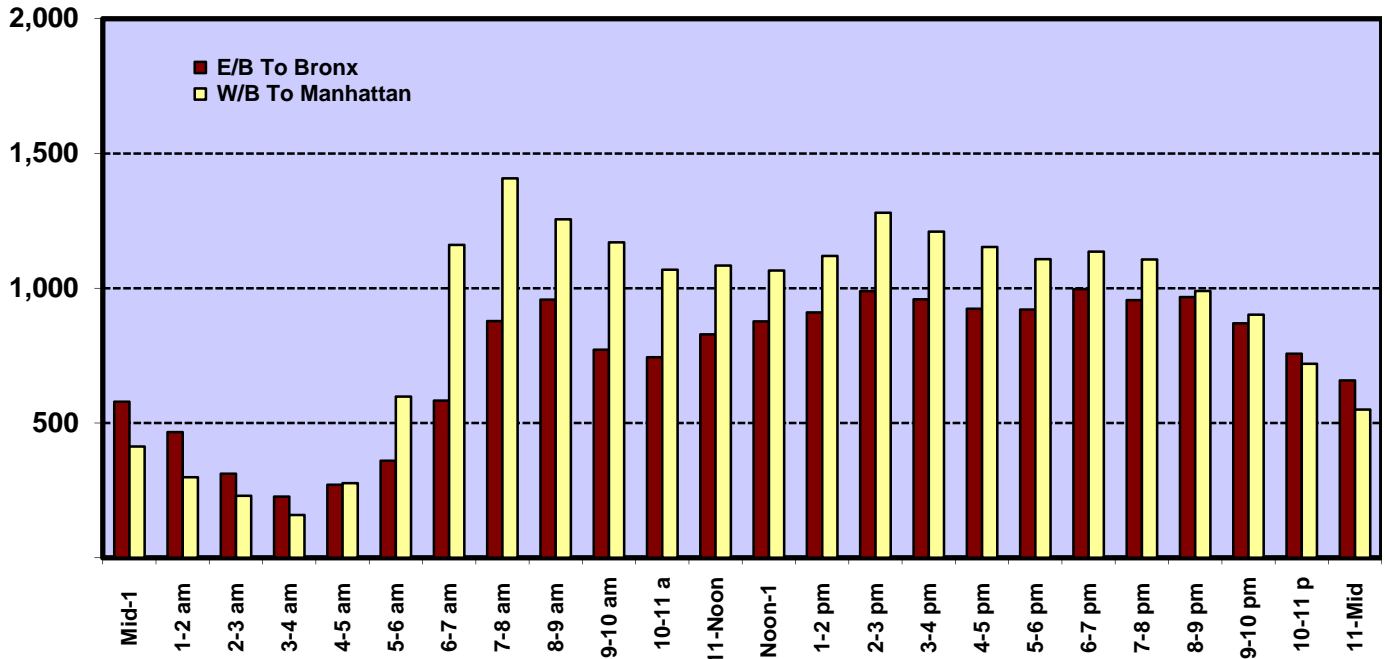
## Hourly Vehicular Volumes University Heights Bridge - 2010

	<i>Eastbound to Bronx</i>						<i>Westbound to Manhattan</i>						<b>2-Way Totals</b>
	Autos	Buses	Commuter Vans	Commercial Trucks	Vans	Totals	Autos	Buses	Commuter Vans	Commercial Trucks	Vans	Totals	
12-1am	---	---	---	---	---	579	---	---	---	---	---	413	992
1-2am	---	---	---	---	---	466	---	---	---	---	---	299	765
2-3am	---	---	---	---	---	312	---	---	---	---	---	230	542
3-4am	---	---	---	---	---	227	---	---	---	---	---	159	386
4-5am	---	---	---	---	---	271	---	---	---	---	---	277	548
5-6am	---	---	---	---	---	360	---	---	---	---	---	598	958
6-7am	---	---	---	---	---	583	---	---	---	---	1,161	1,744	
7-8am	663	46	85	41	43	878	1,222	20	31	35	100	1,408	** 2,286
8-9am	743	8	79	56	72	958	1,089	11	23	44	89	1,256	2,214
9-10am	574	8	57	66	67	772	990	13	16	51	100	1,170	1,942
10-11am	649	3	34	32	26	744	976	4	4	27	58	1,069	1,813
11-12am	638	8	66	78	39	829	923	7	13	58	83	1,084	1,913
12-1pm	791	13	24	27	22	877	985	2	5	27	47	1,066	1,943
1-2pm	780	39	38	30	23	910	1,058	4	4	19	35	1,120	2,030
2-3pm	809	13	69	50	48	989	1,095	11	21	49	104	1,280	2,269
3-4pm	873	15	20	26	25	959	1,095	38	5	24	48	1,210	2,169
4-5pm	805	4	50	37	28	924	1,026	16	14	21	76	1,153	2,077
5-6pm	809	0	51	24	37	921	1,037	1	13	11	46	1,108	2,029
6-7pm	870	0	54	18	55	997	** 1,063	6	9	8	50	1,136	2,133
7-8pm	---	---	---	---	---	956	---	---	---	---	---	1,107	2,063
8-9pm	---	---	---	---	---	967	---	---	---	---	---	990	1,957
9-10pm	---	---	---	---	---	870	---	---	---	---	---	902	1,772
10-11pm	---	---	---	---	---	757	---	---	---	---	---	720	1,477
11-12pm	---	---	---	---	---	658	---	---	---	---	---	550	1,208
Totals	---	---	---	---	---	17,764	---	---	---	---	---	21,466	39,230
7-10am	1,980	62	221	163	182	2,608	3,301	44	70	130	289	3,834	6,442
10am-1pm	2,078	24	124	137	87	2,450	2,884	13	22	112	188	3,219	5,669
1-4pm	2,462	67	127	106	96	2,858	3,248	53	30	92	187	3,610	6,468
4-7pm	2,484	4	155	79	120	2,842	3,126	23	36	40	172	3,397	6,239
7am-7pm	9,004	157	627	485	485	10,758	12,559	133	158	374	836	14,060	24,818
6-10am	---	---	---	---	---	3,191	---	---	---	---	---	4,995	8,186
3-7pm	3,357	19	175	105	145	3,801	4,221	61	41	64	220	4,607	8,408
6am-7pm	---	---	---	---	---	11,341	---	---	---	---	---	15,221	26,562

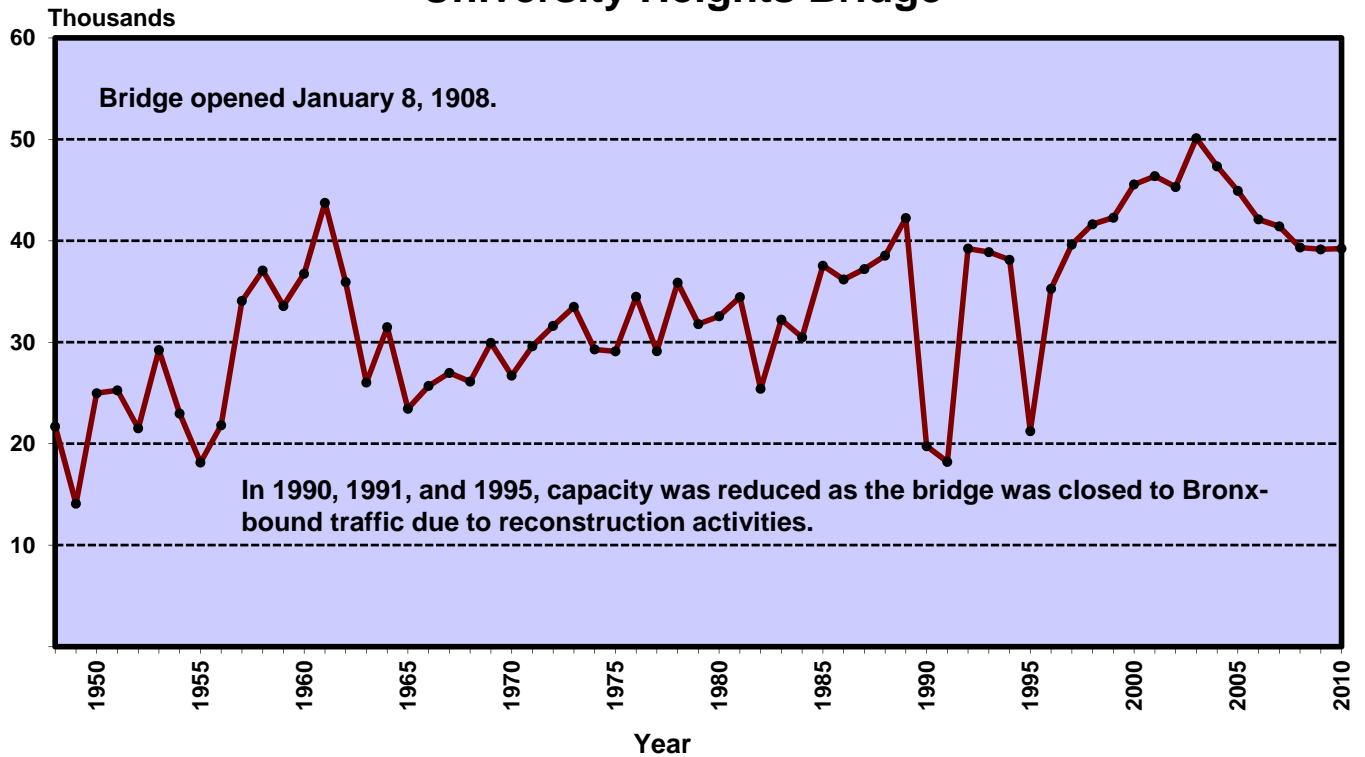
Based on 1989 Classification Survey Data

\*\* Peak Volumes

## Hourly Vehicular Volumes University Heights Bridge ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions University Heights Bridge



## Hourly Vehicular Volumes Washington Bridge - 2010

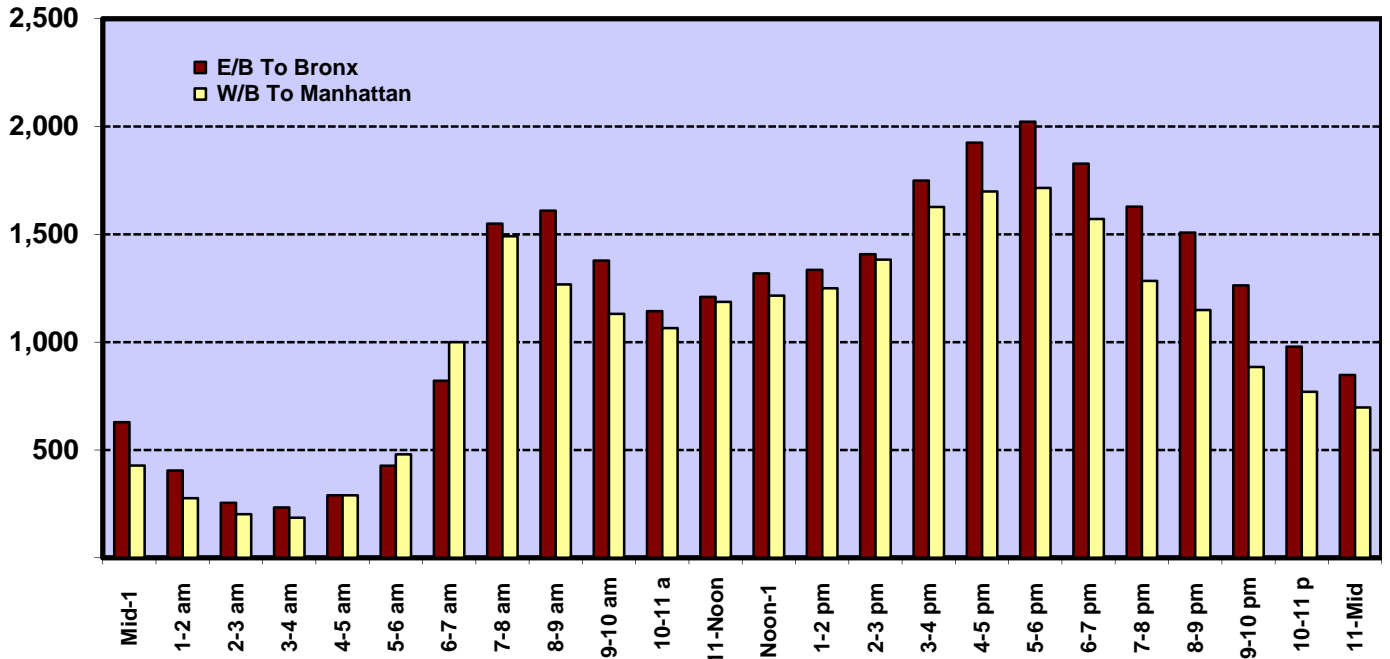
	<i>Eastbound to Bronx</i>						<i>Westbound to Manhattan</i>						<b>2-Way Totals</b>
	Autos	Buses	Commuter Vans	Commercial Trucks	Vans	Totals	Autos	Buses	Commuter Vans	Commercial Trucks	Vans	Totals	
12-1am	---	---	---	---	---	629	---	---	---	---	---	428	1,057
1-2am	---	---	---	---	---	405	---	---	---	---	---	276	681
2-3am	---	---	---	---	---	255	---	---	---	---	---	202	457
3-4am	---	---	---	---	---	233	---	---	---	---	---	186	419
4-5am	---	---	---	---	---	290	---	---	---	---	---	290	580
5-6am	---	---	---	---	---	427	---	---	---	---	---	480	907
6-7am	---	---	---	---	---	821	---	---	---	---	---	1,000	1,821
7-8am	1,327	51	28	46	98	1,550	1,259	59	112	36	25	1,491	3,041
8-9am	1,349	41	24	72	124	1,610	1,069	59	65	49	26	1,268	2,878
9-10am	1,141	37	24	90	86	1,378	983	34	50	38	26	1,131	2,509
10-11am	1,039	31	7	29	38	1,144	972	35	10	26	22	1,065	2,209
11-12am	1,046	25	15	58	66	1,210	1,035	49	31	33	39	1,187	2,397
12-1pm	1,181	39	18	24	57	1,319	1,139	30	10	21	16	1,216	2,535
1-2pm	1,222	30	5	31	47	1,335	1,170	30	17	19	14	1,250	2,585
2-3pm	1,225	30	22	60	71	1,408	1,194	56	42	51	40	1,383	2,791
3-4pm	1,590	37	11	31	80	1,749	1,467	46	46	46	22	1,627	3,376
4-5pm	1,602	38	48	59	178	1,925	1,447	41	73	89	49	1,699	3,624
5-6pm	1,808	33	50	36	95	2,022 **	1,556	31	47	36	45	1,715 **	3,737 **
6-7pm	1,679	22	30	23	74	1,828	1,423	39	57	20	32	1,571	3,399
7-8pm	---	---	---	---	---	1,628	---	---	---	---	---	1,284	2,912
8-9pm	---	---	---	---	---	1,508	---	---	---	---	---	1,149	2,657
9-10pm	---	---	---	---	---	1,263	---	---	---	---	---	885	2,148
10-11pm	---	---	---	---	---	979	---	---	---	---	---	770	1,749
11-12pm	---	---	---	---	---	848	---	---	---	---	---	697	1,545
Totals	---	---	---	---	---	27,764	---	---	---	---	---	24,250	52,014
7-10am	3,817	129	76	208	308	4,538	3,311	152	227	123	77	3,890	8,428
10am-1pm	3,266	95	40	111	161	3,673	3,146	114	51	80	77	3,468	7,141
1-4pm	4,037	97	38	122	198	4,492	3,831	132	105	116	76	4,260	8,752
4-7pm	5,089	93	128	118	347	5,775	4,426	111	177	145	126	4,985	10,760
7am-7pm	16,209	414	282	559	1,014	18,478	14,714	509	560	464	356	16,603	35,081
6-10am	---	---	---	---	---	5,359	---	---	---	---	---	4,890	10,249
3-7pm	6,679	130	139	149	427	7,524	5,893	157	223	191	148	6,612	14,136
6am-7pm	---	---	---	---	---	19,299	---	---	---	---	---	17,603	36,902

Based on 1989 Classification Survey Data

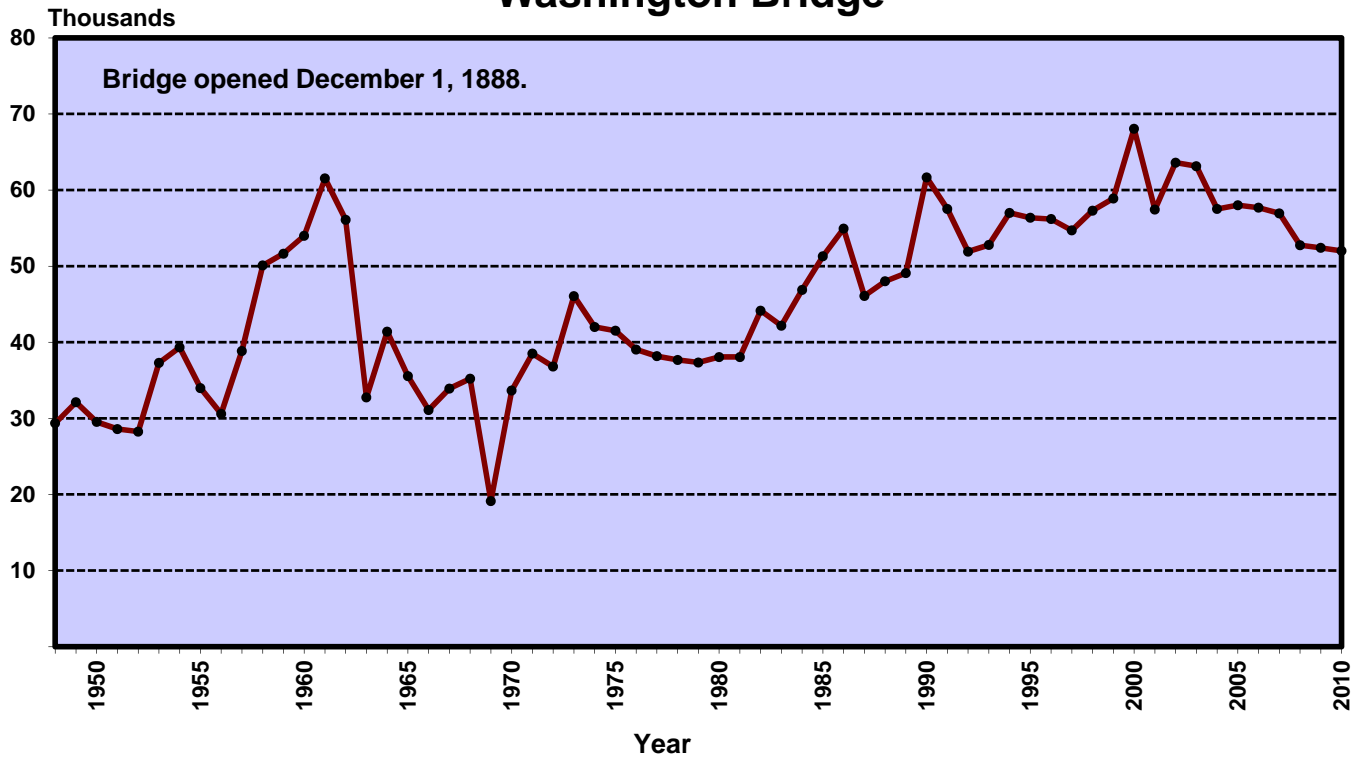
\*\* Peak Volumes



## Hourly Vehicular Volumes Washington Bridge ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions Washington Bridge



## Hourly Vehicular Volumes Willis Avenue Bridge - 2010

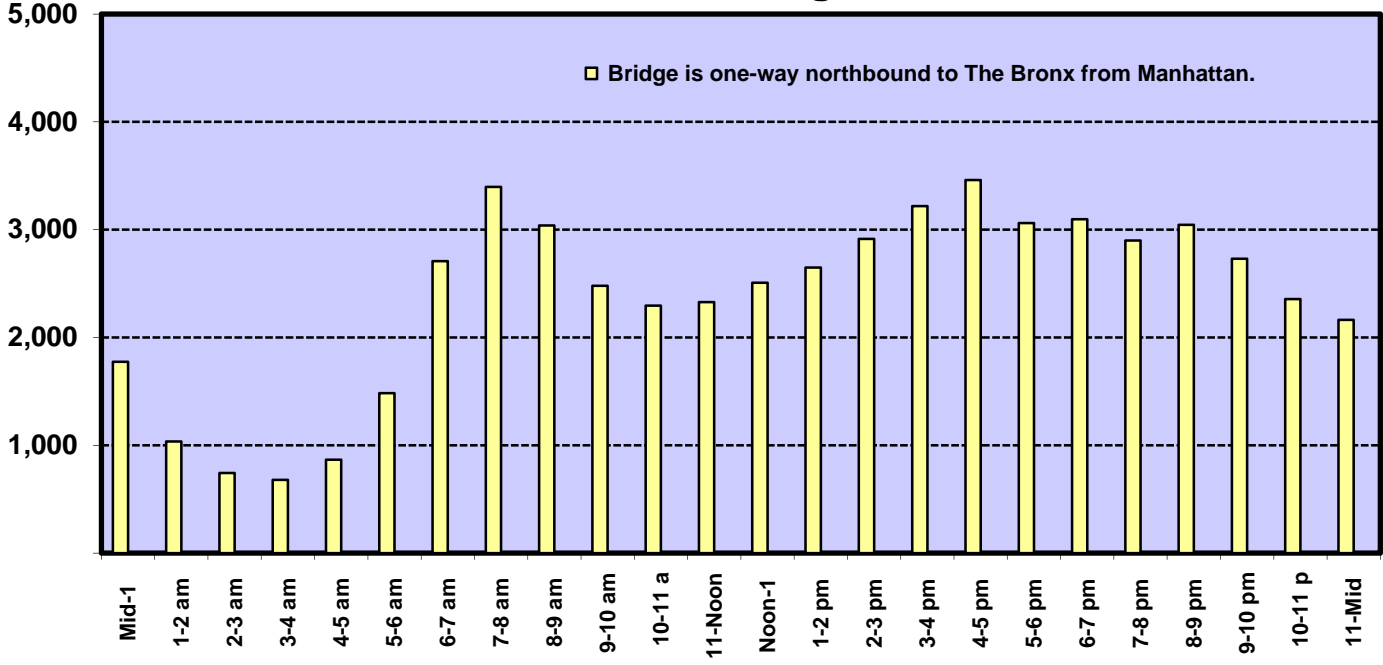
	<b>Northbound to Bronx</b>						<b>Southbound to Manhattan</b>						<b>2-Way Totals</b>
	Autos	Buses	Commuter Vans	Commercial Trucks	Commercial Vans	Totals	Autos	Buses	Commuter Vans	Commercial Trucks	Commercial Vans	Totals	
12-1am	---	---	---	---	---	1,775							1,775
1-2am	---	---	---	---	---	1,036							1,036
2-3am	---	---	---	---	---	743							743
3-4am	---	---	---	---	---	680							680
4-5am	---	---	---	---	---	866							866
5-6am	---	---	---	---	---	1,484							1,484
6-7am	---	---	---	---	---	2,708							2,708
7-8am	2,892	86	135	167	117	3,397							3,397
8-9am	2,452	104	91	177	215	3,039							3,039
9-10am	1,852	109	91	222	205	2,479							2,479
10-11am	1,913	44	61	143	135	2,296							2,296
11-12am	1,722	30	101	247	228	2,328							2,328
12-1pm	2,197	37	46	135	92	2,507							2,507
1-2pm	2,366	22	36	99	125	2,648							2,648
2-3pm	2,158	26	106	311	314	2,915							2,915
3-4pm	2,848	52	49	137	133	3,219							3,219
4-5pm	2,724	32	105	233	367	3,461 **							3,461 **
5-6pm	2,489	44	83	139	306	3,061							3,061
6-7pm	2,710	26	83	95	183	3,097							3,097
7-8pm	---	---	---	---	---	2,900							2,900
8-9pm	---	---	---	---	---	3,045							3,045
9-10pm	---	---	---	---	---	2,730							2,730
10-11pm	---	---	---	---	---	2,357							2,357
11-12pm	---	---	---	---	---	2,163							2,163
Totals	---	---	---	---	---	56,934							56,934
7-10am	7,196	299	317	566	537	8,915							8,915
10am-1pm	5,832	111	208	525	455	7,131							7,131
1-4pm	7,372	100	191	547	572	8,782							8,782
4-7pm	7,923	102	271	467	856	9,619							9,619
7am-7pm	28,323	612	987	2,105	2,420	34,447							34,447
6-10am	---	---	---	---	---	11,623							11,623
3-7pm	10,771	154	320	604	989	12,838							12,838
6am-7pm	---	---	---	---	---	37,155							37,155

**Bridge is 1-way northbound  
to The Bronx**

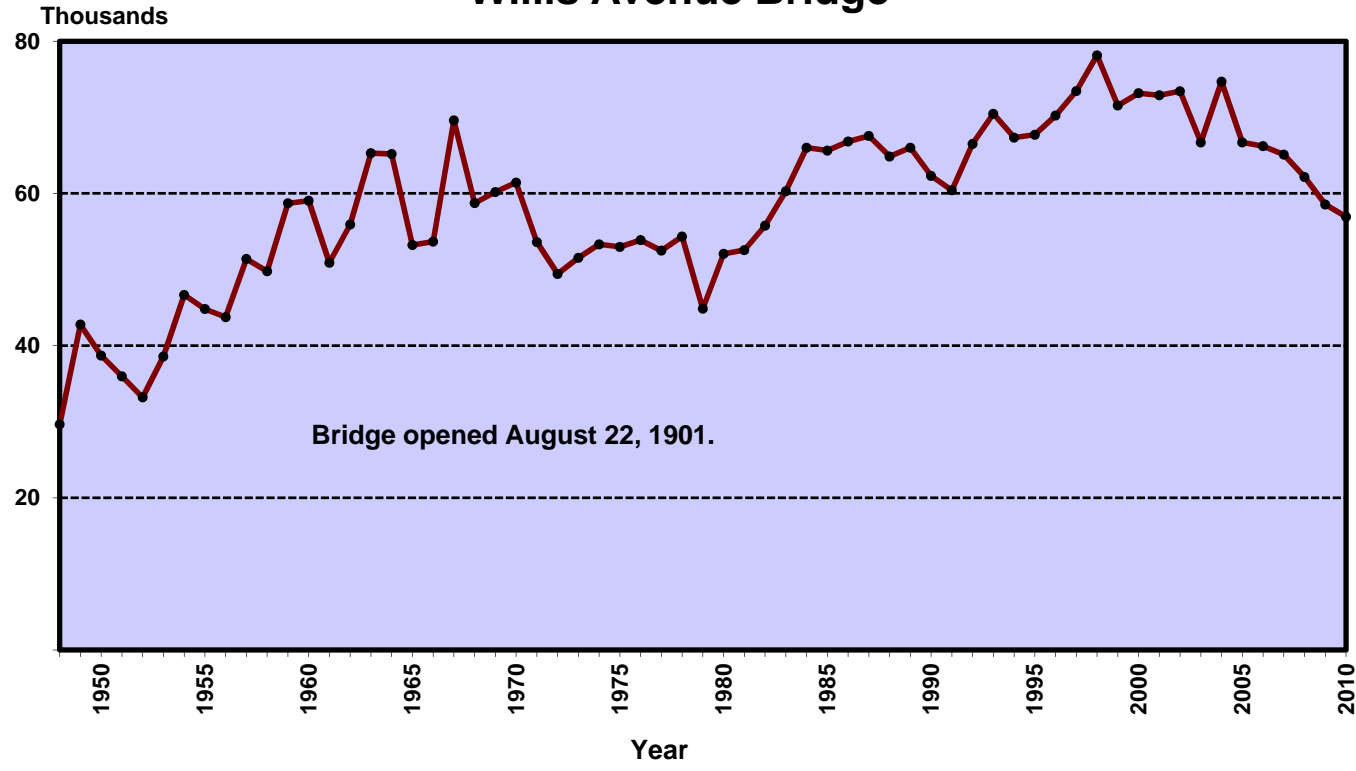
Based on 1989 Classification Survey Data

\*\* Peak Volumes

## Hourly Vehicular Volumes Willis Avenue Bridge ~ 2010



## Average Daily Traffic Volumes Willis Avenue Bridge



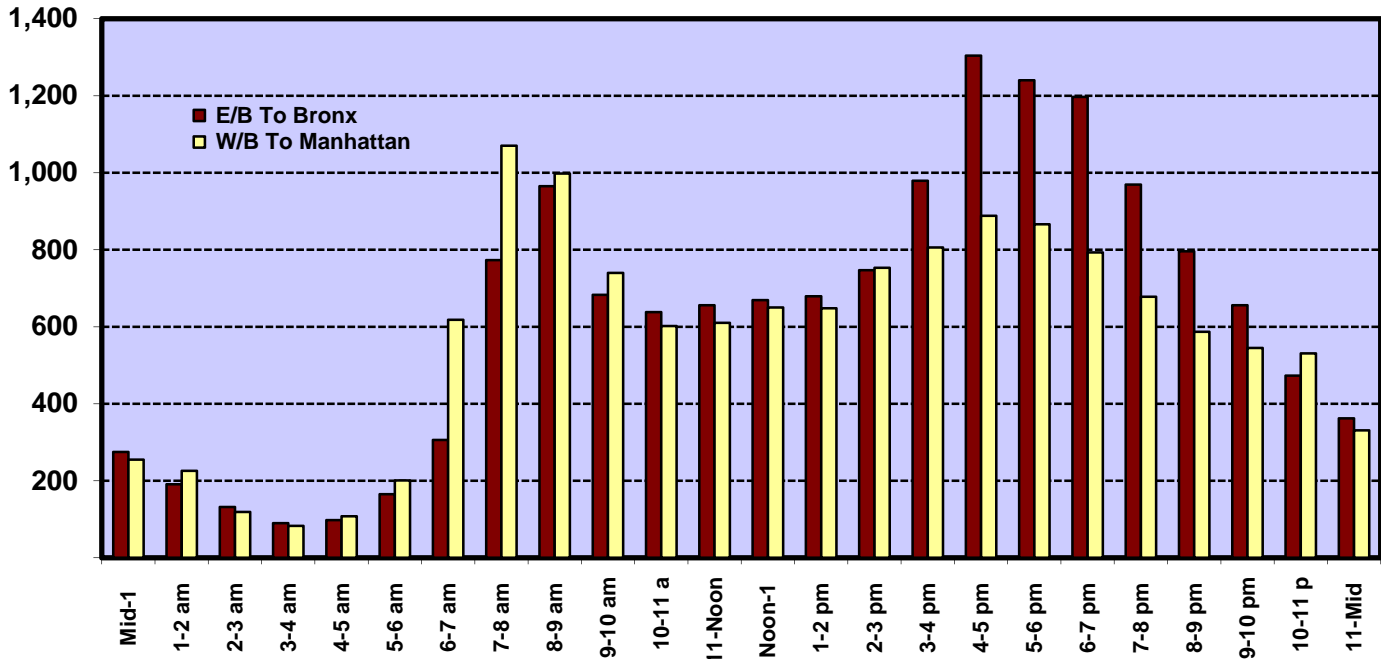
## Hourly Vehicular Volumes 145th Street Bridge - 2010

	<i>Eastbound to Bronx</i>						<i>Westbound to Manhattan</i>						<b>2-Way Totals</b>
	Autos	Buses	Commuter Vans	Commercial Trucks	Commercial Vans	Totals	Autos	Buses	Commuter Vans	Commercial Trucks	Commercial Vans	Totals	
12-1am	---	---	---	---	---	275	---	---	---	---	---	255	530
1-2am	---	---	---	---	---	191	---	---	---	---	---	226	417
2-3am	---	---	---	---	---	132	---	---	---	---	---	119	251
3-4am	---	---	---	---	---	90	---	---	---	---	---	83	173
4-5am	---	---	---	---	---	98	---	---	---	---	---	108	206
5-6am	---	---	---	---	---	165	---	---	---	---	---	201	366
6-7am	---	---	---	---	---	306	---	---	---	---	---	618	924
7-8am	648	31	42	42	10	773	931	43	19	40	37	1,070 **	1,843
8-9am	805	29	49	52	30	965	856	29	33	28	52	998	1,963
9-10am	551	12	37	59	24	683	593	20	36	28	63	740	1,423
10-11am	561	9	15	26	27	638	480	16	33	25	48	602	1,240
11-12am	499	16	30	68	43	656	452	11	46	47	54	610	1,266
12-1pm	580	13	17	42	17	669	604	11	11	9	15	650	1,319
1-2pm	586	12	33	31	17	679	585	29	11	15	8	648	1,327
2-3pm	562	17	31	96	41	747	630	24	29	28	42	753	1,500
3-4pm	862	22	23	42	30	979	751	29	8	7	11	806	1,785
4-5pm	1,038	17	68	116	65	1,304 **	823	18	15	9	23	888	2,192 **
5-6pm	1,010	12	58	84	76	1,240	812	18	14	9	13	866	2,106
6-7pm	1,042	33	36	28	58	1,197	748	24	6	4	11	793	1,990
7-8pm	---	---	---	---	---	969	---	---	---	---	---	678	1,647
8-9pm	---	---	---	---	---	796	---	---	---	---	---	587	1,383
9-10pm	---	---	---	---	---	656	---	---	---	---	---	545	1,201
10-11pm	---	---	---	---	---	473	---	---	---	---	---	531	1,004
11-12pm	---	---	---	---	---	362	---	---	---	---	---	331	693
Totals	---	---	---	---	---	15,043	---	---	---	---	---	13,706	28,749
7-10am	2,004	72	128	153	64	2,421	2,380	92	88	96	152	2,808	5,229
10am-1pm	1,640	38	62	136	87	1,963	1,536	38	90	81	117	1,862	3,825
1-4pm	2,010	51	87	169	88	2,405	1,966	82	48	50	61	2,207	4,612
4-7pm	3,090	62	162	228	199	3,741	2,383	60	35	22	47	2,547	6,288
7am-7pm	8,744	223	439	686	438	10,530	8,265	272	261	249	377	9,424	19,954
6-10am	---	---	---	---	---	2,727	---	---	---	---	---	3,426	6,153
3-7pm	3,952	84	185	270	229	4,720	3,134	89	43	29	58	3,353	8,073
6am-7pm	---	---	---	---	---	10,836	---	---	---	---	---	10,042	20,878

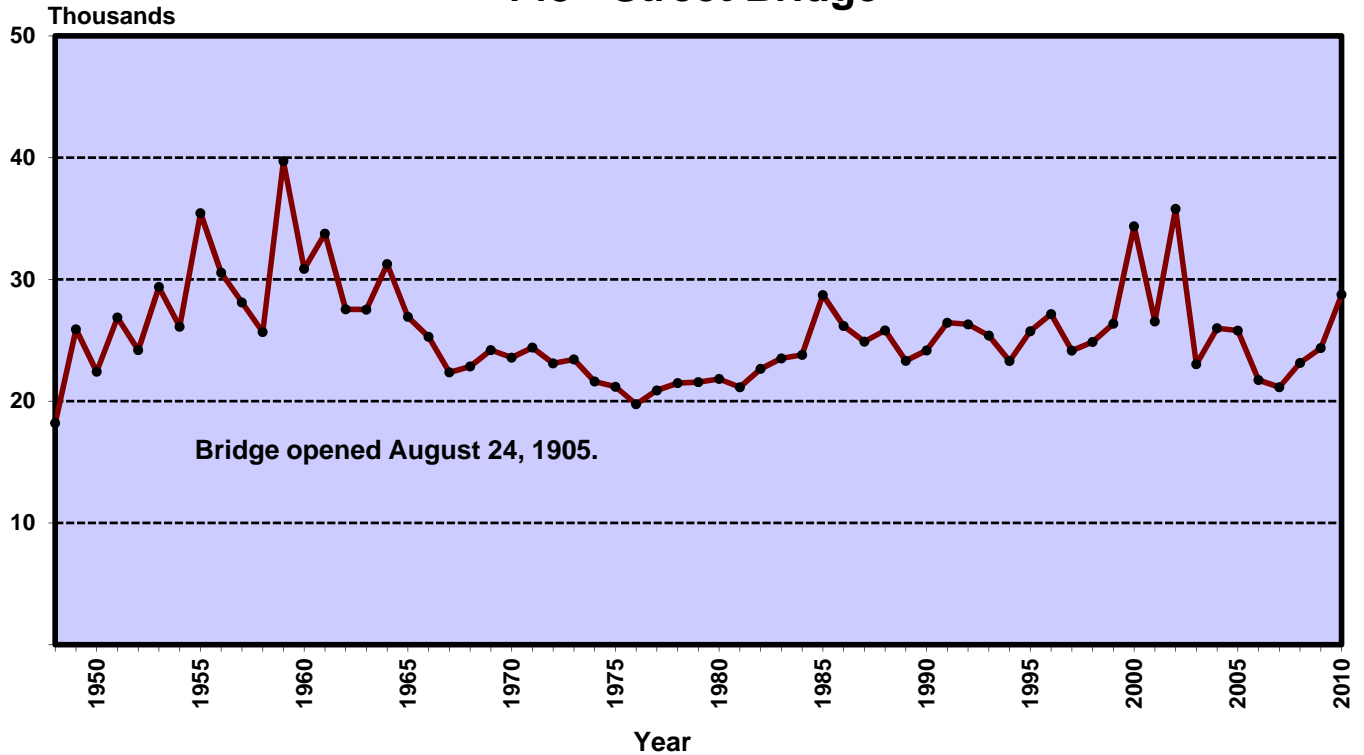
Based on 1989 Classification Survey Data

\*\* Peak Volumes

## Hourly Vehicular Volumes 145<sup>th</sup> Street Bridge ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions 145<sup>th</sup> Street Bridge





# MTABT Facilities



**Robert F. Kennedy Memorial Bridge  
(Formerly Triborough Bridge)**

**MTABT Manhattan Facilities ~ Average Daily Traffic Volumes  
1948 - 2010**

<b>Year</b>	<b>Robert F. Kennedy Memorial Bridge</b>					<b>Manhattan Totals</b>
	<b>Brooklyn- Battery Tunnel</b>	<b>Henry Hudson Bridge</b>	<b>Queens- Midtown Tunnel</b>	<b>Manh. Plz. (Triborough Bridge)</b>		
1948	<i>Opened</i>	40,050	26,462	26,465	92,977	
1949	<i>05/25/1950</i>	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	71,540	243,107	
1967	57,611	43,409	69,416	73,602	244,038	
1968	60,652	44,908	66,432	75,932	247,924	
1969	62,116	45,382	68,884	78,481	254,863	
1970	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	62,959	54,910	76,243	99,438	293,550	
1989	59,254	50,556	72,828	92,720	275,358	
1990	60,512	57,528	71,186	99,840	289,066	
1991	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	
2005	49,043	70,407	86,063	91,898	297,411	
2006	57,436	71,761	89,972	98,582	317,751	
2007	56,539	70,094	88,379	97,241	312,253	
2008	55,037	69,101	86,709	95,146	305,993	
2009	50,674	66,607	85,144	91,731	294,156	
2010	54,187	69,641	88,014	93,455	305,297	

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, 3/05, 3/08, 7/09, & 12/10.



## Hourly Vehicular Volumes

### Metropolitan Transportation Authority Bridges & Tunnels 2010

	<i>Brooklyn-Battery Tunnel</i>		<i>Henry Hudson Bridge</i>		<i>Queens-Midtown Tunnel</i>		<i>Robert F. Kennedy Memorial Bridge (Triborough Bridge)</i>		<i>Totals</i>	
	<i>N/B</i>	<i>S/B</i>	<i>S/B</i>	<i>N/B</i>	<i>W/B</i>	<i>E/B</i>	<i>W/B</i>	<i>E/B</i>	<i>Entering Manhattan</i>	<i>Leaving Manhattan</i>
12-1am	163	557	140	441	533	814	526	465	1,362	2,277
1-2am	78	199	77	184	232	421	183	225	570	1,029
2-3am	49	109	47	109	111	240	123	157	330	615
3-4am	52	80	53	67	152	196	111	165	368	508
4-5am	151	83	128	71	281	375	286	420	846	949
5-6am	667	110	555	136	947	749	913	986	3,082	1,981
6-7am	1,996	377	2,331	547	2,236	1,314	2,947	1,631	9,510	3,869
7-8am	3,152	604	3,547 **	1,429	3,757	1,392	4,065	2,163	14,521	5,588
8-9am	3,253 **	739	3,447	1,897	4,259 **	1,309	4,166 **	2,257	15,125 **	6,202
9-10am	2,891	814	3,008	1,231	3,988	1,382	3,652	1,985	13,539	5,412
10-11am	1,746	783	2,275	1,050	3,156	1,618	3,249	1,846	10,426	5,297
11-12am	1,534	910	1,880	1,113	2,779	1,745	2,710	1,982	8,903	5,750
12-1pm	1,398	1,045	1,737	1,216	2,453	2,076	2,530	2,144	8,118	6,481
1-2pm	1,292	1,150	1,575	1,303	2,321	2,353	2,573	2,292	7,761	7,098
2-3pm	1,450	1,485	1,784	1,702	2,584	2,756	2,816	2,620	8,634	8,563
3-4pm	1,558	1,944	2,429	2,280	2,751	2,943	3,309	3,007	10,047	10,174
4-5pm	1,283	2,339	2,601	2,523	2,772	2,949 **	3,189	3,075 **	9,845	10,886
5-6pm	1,367	2,612 **	2,933	3,043 **	2,931	2,849	3,450	2,933	10,681	11,437 **
6-7pm	1,327	2,487	2,831	2,924	2,981	2,141	3,318	2,562	10,457	10,114
7-8pm	995	2,153	1,721	2,403	2,211	2,326	2,493	2,314	7,420	9,196
8-9pm	713	1,840	1,074	1,841	1,659	2,080	1,878	1,950	5,324	7,711
9-10pm	521	1,414	851	1,710	1,516	2,169	1,660	1,670	4,548	6,963
10-11pm	446	1,106	551	1,595	1,229	1,899	1,360	1,361	3,586	5,961
11-12pm	361	804	305	946	867	1,212	925	813	2,458	3,775
<b>Totals</b>	<b>28,443</b>	<b>25,744</b>	<b>37,880</b>	<b>31,761</b>	<b>48,706</b>	<b>39,308</b>	<b>52,432</b>	<b>41,023</b>	<b>167,461</b>	<b>137,836</b>
7-10am	9,296	2,157	10,002	4,557	12,004	4,083	11,883	6,405	43,185	17,202
10am-1pm	4,678	2,738	5,892	3,379	8,388	5,439	8,489	5,972	27,447	17,528
1-4pm	4,300	4,579	5,788	5,285	7,656	8,052	8,698	7,919	26,442	25,835
4-7pm	3,977	7,438	8,365	8,490	8,684	7,939	9,957	8,570	30,983	32,437
7am-7pm	22,251	16,912	30,047	21,711	36,732	25,513	39,027	28,866	128,057	93,002
6-10am	11,292	2,534	12,333	5,104	14,240	5,397	14,830	8,036	52,695	21,071
3-7pm	5,535	9,382	10,794	10,770	11,435	10,882	13,266	11,577	41,030	42,611
6am-7pm	24,247	17,289	32,378	22,258	38,968	26,827	41,974	30,497	137,567	96,871

\*\* Peak Volumes

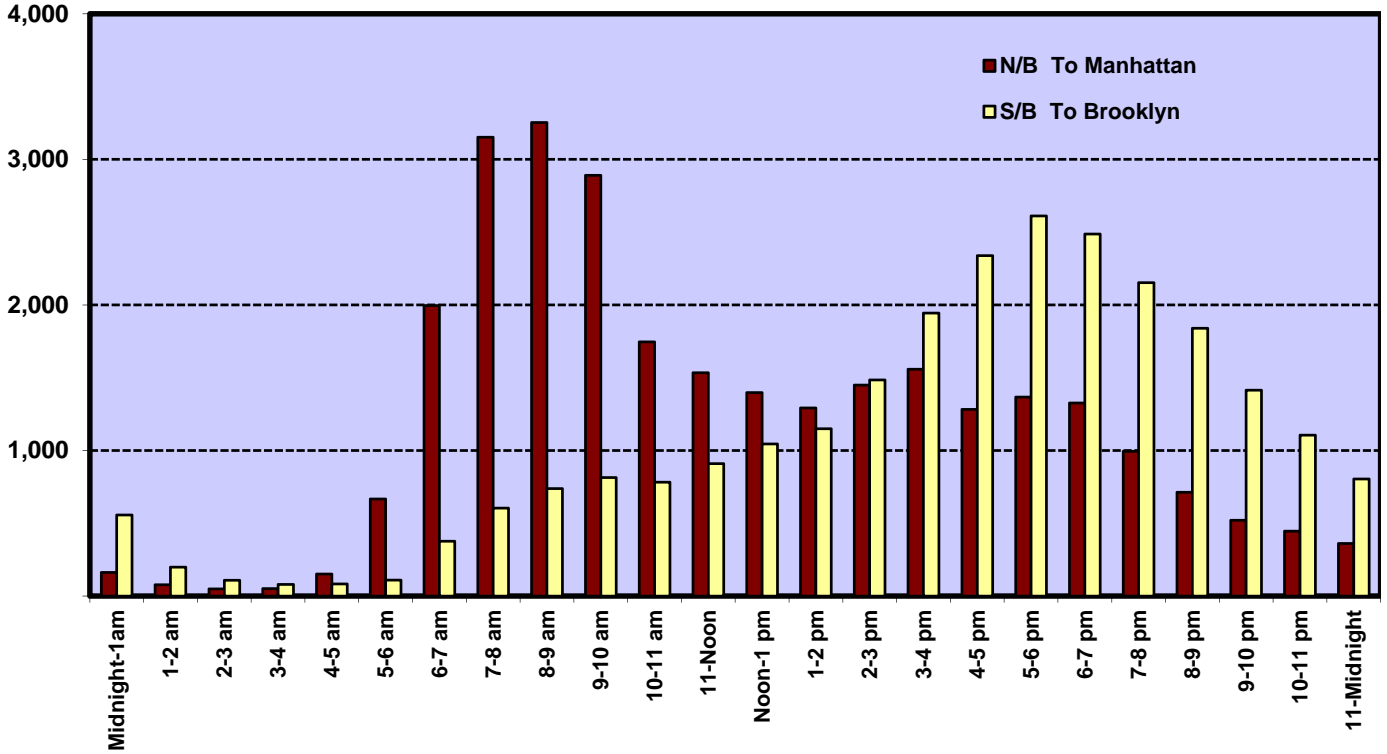
### Hourly Vehicular Volumes Brooklyn Battery Tunnel - 2010

FHWA Classes ▶	Northbound to Manhattan						Southbound to Brooklyn						2-Way Grand Totals
	Commuter Vans Commercial Vans			Single Unit Trucks	Tractor Trailers	Total Vehicles	Commuter Vans Commercial Vans			Single Unit Trucks	Tractor Trailers	Total Vehicles	
	Autos & Motorcycles	Pickups Large SUVs	Buses				Autos & Motorcycles	Pickups Large SUVs	Buses				
	1 & 2	3	4	5 - 7	8 - 13		1 & 2	3	4	5 - 7	8 - 13		
12-1am	140	5	9	9	0	163	507	11	33	6	0	557	720
1-2am	69	3	5	1	0	78	190	0	8	1	0	199	277
2-3am	44	0	3	2	0	49	104	1	3	1	0	109	158
3-4am	44	1	5	2	0	52	78	0	0	2	0	80	132
4-5am	97	6	37	11	0	151	78	0	4	1	0	83	234
5-6am	600	7	53	7	0	667	98	1	8	3	0	110	777
6-7am	1,782	12	179	23	0	1,996	281	6	79	11	0	377	2,373
7-8am	2,767	17	326	42	0	3,152	435	7	146	16	0	604	3,756
8-9am	2,844	16	354	39	0	3,253 **	539	6	176	18	0	739	3,992 **
9-10am	2,639	21	188	43	0	2,891	624	8	159	23	0	814	3,705
10-11am	1,589	21	88	47	1	1,746	685	9	73	16	0	783	2,529
11-12am	1,422	13	63	35	1	1,534	821	9	62	18	0	910	2,444
12-1pm	1,286	14	68	30	0	1,398	961	12	53	19	0	1,045	2,443
1-2pm	1,169	11	79	33	0	1,292	1,038	12	74	26	0	1,150	2,442
2-3pm	1,303	11	110	26	0	1,450	1,359	15	85	26	0	1,485	2,935
3-4pm	1,392	6	147	13	0	1,558	1,772	13	135	24	0	1,944	3,502
4-5pm	1,118	4	151	9	1	1,283	2,120	7	192	20	0	2,339	3,622
5-6pm	1,218	3	137	6	3	1,367	2,323	7	267	14	1	2,612 **	3,979
6-7pm	1,232	4	83	7	1	1,327	2,284	6	185	11	1	2,487	3,814
7-8pm	945	1	46	3	0	995	2,029	6	110	8	0	2,153	3,148
8-9pm	677	4	27	5	0	713	1,719	8	103	10	0	1,840	2,553
9-10pm	495	1	23	2	0	521	1,337	4	59	14	0	1,414	1,935
10-11pm	422	1	20	3	0	446	1,062	5	31	8	0	1,106	1,552
11-12pm	320	0	30	11	0	361	758	6	32	8	0	804	1,165
Totals	25,614	182	2,231	409	7	28,443	23,202	159	2,077	304	2	25,744	54,187
7-10am	8,250	54	868	124	0	9,296	1,598	21	481	57	0	2,157	11,453
10am-1pm	4,297	48	219	112	2	4,678	2,467	30	188	53	0	2,738	7,416
1-4pm	3,864	28	336	72	0	4,300	4,169	40	294	76	0	4,579	8,879
4-7pm	3,568	11	371	22	5	3,977	6,727	20	644	45	2	7,438	11,415
7am-7pm	19,979	141	1,794	330	7	22,251	14,961	111	1,607	231	2	16,912	39,163
6-10am	10,032	66	1,047	147	0	11,292	1,879	27	560	68	0	2,534	13,826
3-7pm	4,960	17	518	35	5	5,535	8,499	33	779	69	2	9,382	14,917
6am-7pm	21,761	153	1,973	353	7	24,247	15,242	117	1,686	242	2	17,289	41,536

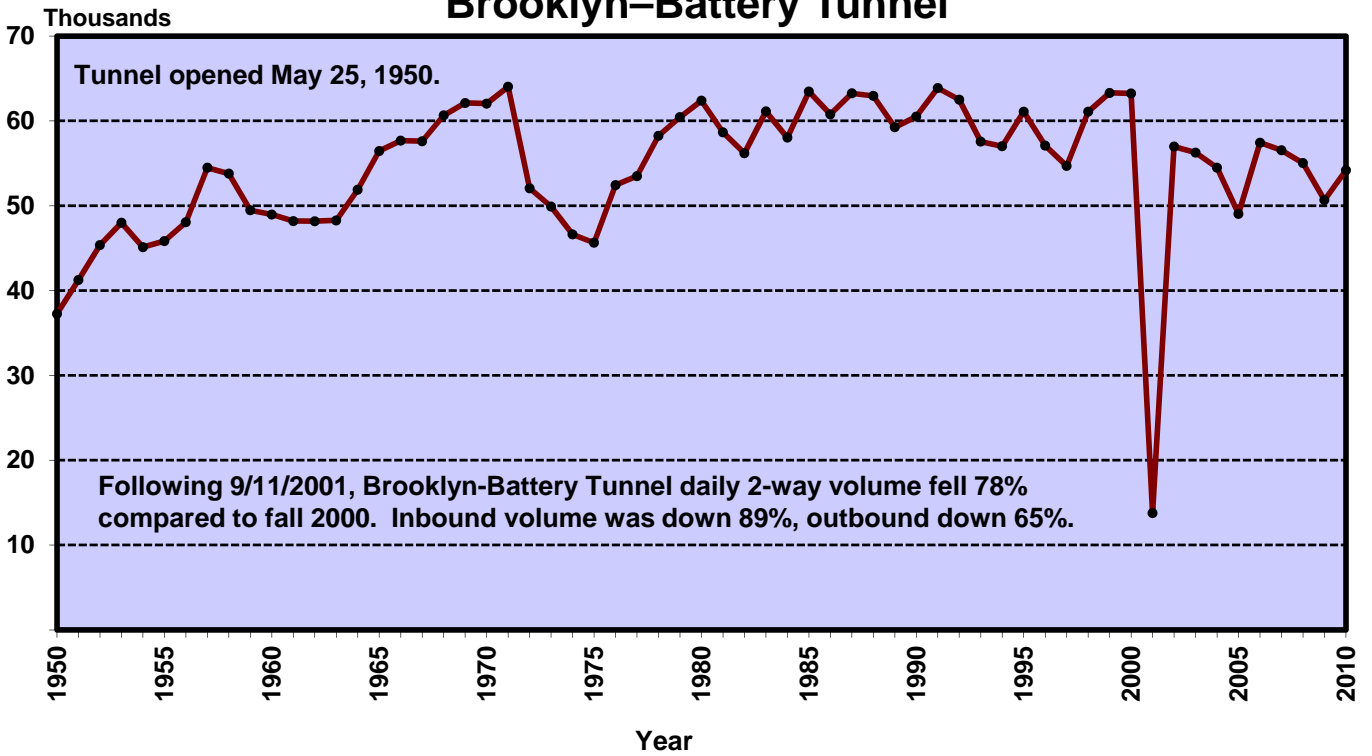
Based on May 2006 Classification Survey Data.

\*\* Peak Volumes

## Hourly Vehicular Volumes Brooklyn-Battery Tunnel ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions Brooklyn-Battery Tunnel



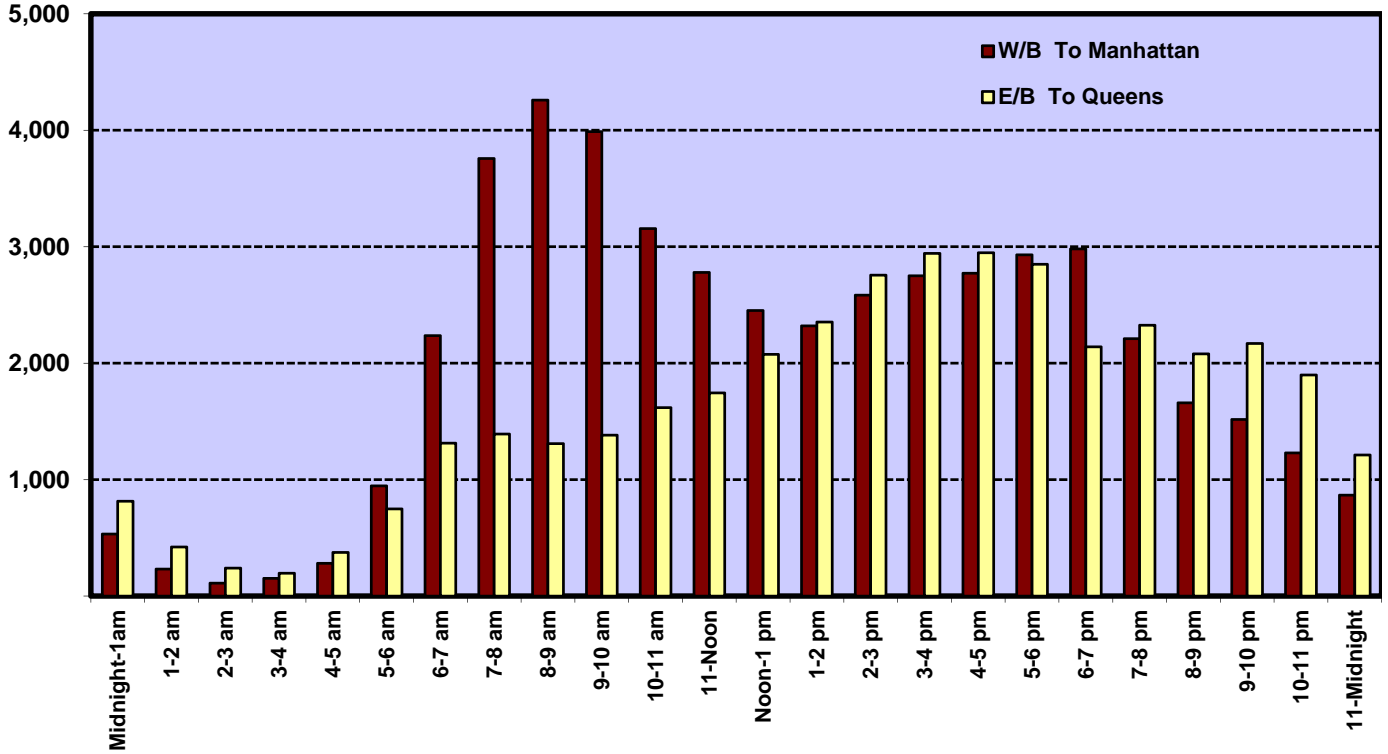
### Hourly Vehicular Volumes Queens-Midtown Tunnel - 2010

FHWA Classes ▶	Westbound to Manhattan						Eastbound to Queens						2-Way Grand Totals
	Commuter Vans Commercial Vans			Single Unit Trucks	Tractor Trailers	Total Vehicles	Commuter Vans Commercial Vans			Single Unit Trucks	Tractor Trailers	Total Vehicles	
	Autos & Motorcycles	Pickups Large SUVs	Buses				Autos & Motorcycles	Pickups Large SUVs	Buses				
1 & 2	3	4	5 - 7	8 - 13	1 & 2	3	4	5 - 7	8 - 13				
12-1am	516	2	3	12	0	533	786	7	1	20	0	814	1,347
1-2am	221	2	1	8	0	232	401	4	0	16	0	421	653
2-3am	103	1	1	6	0	111	225	5	0	10	0	240	351
3-4am	138	1	3	10	0	152	175	9	0	12	0	196	348
4-5am	226	5	15	35	0	281	309	26	3	36	1	375	656
5-6am	826	9	47	65	0	947	668	19	11	51	0	749	1,696
6-7am	1,911	78	141	106	0	2,236	1,190	36	51	37	0	1,314	3,550
7-8am	3,239	133	237	147	1	3,757	1,238	53	66	35	0	1,392	5,149
8-9am	3,830	120	150	159	0	4,259 **	1,143	42	79	45	0	1,309	5,568
9-10am	3,594	101	180	109	4	3,988	1,213	52	70	47	0	1,382	5,370
10-11am	2,865	88	106	95	2	3,156	1,403	65	78	72	0	1,618	4,774
11-12am	2,576	69	66	68	0	2,779	1,550	59	75	61	0	1,745	4,524
12-1pm	2,276	37	56	84	0	2,453	1,859	67	57	93	0	2,076	4,529
1-2pm	2,117	66	69	69	0	2,321	2,089	107	60	97	0	2,353	4,674
2-3pm	2,346	62	118	58	0	2,584	2,555	79	47	75	0	2,756	5,340
3-4pm	2,445	57	179	70	0	2,751	2,721	66	68	88	0	2,943	5,694
4-5pm	2,534	34	169	35	0	2,772	2,719	81	69	80	0	2,949 **	5,721
5-6pm	2,753	19	135	24	0	2,931	2,688	45	73	43	0	2,849	5,780 **
6-7pm	2,850	20	83	28	0	2,981	2,034	26	49	32	0	2,141	5,122
7-8pm	2,131	14	50	16	0	2,211	2,218	23	63	22	0	2,326	4,537
8-9pm	1,578	21	29	31	0	1,659	1,976	24	39	41	0	2,080	3,739
9-10pm	1,457	14	18	27	0	1,516	2,080	22	23	43	1	2,169	3,685
10-11pm	1,177	8	13	31	0	1,229	1,831	20	10	38	0	1,899	3,128
11-12pm	841	7	4	15	0	867	1,179	4	4	25	0	1,212	2,079
Totals	44,550	968	1,873	1,308	7	48,706	36,250	941	996	1,119	2	39,308	88,014
7-10am	10,663	354	567	415	5	12,004	3,594	147	215	127	0	4,083	16,087
10am-1pm	7,717	194	228	247	2	8,388	4,812	191	210	226	0	5,439	13,827
1-4pm	6,908	185	366	197	0	7,656	7,365	252	175	260	0	8,052	15,708
4-7pm	8,137	73	387	87	0	8,684	7,441	152	191	155	0	7,939	16,623
7am-7pm	33,425	806	1,548	946	7	36,732	23,212	742	791	768	0	25,513	62,245
6-10am	12,574	432	708	521	5	14,240	4,784	183	266	164	0	5,397	19,637
3-7pm	10,582	130	566	157	0	11,435	10,162	218	259	243	0	10,882	22,317
6am-7pm	35,336	884	1,689	1,052	7	38,968	24,402	778	842	805	0	26,827	65,795

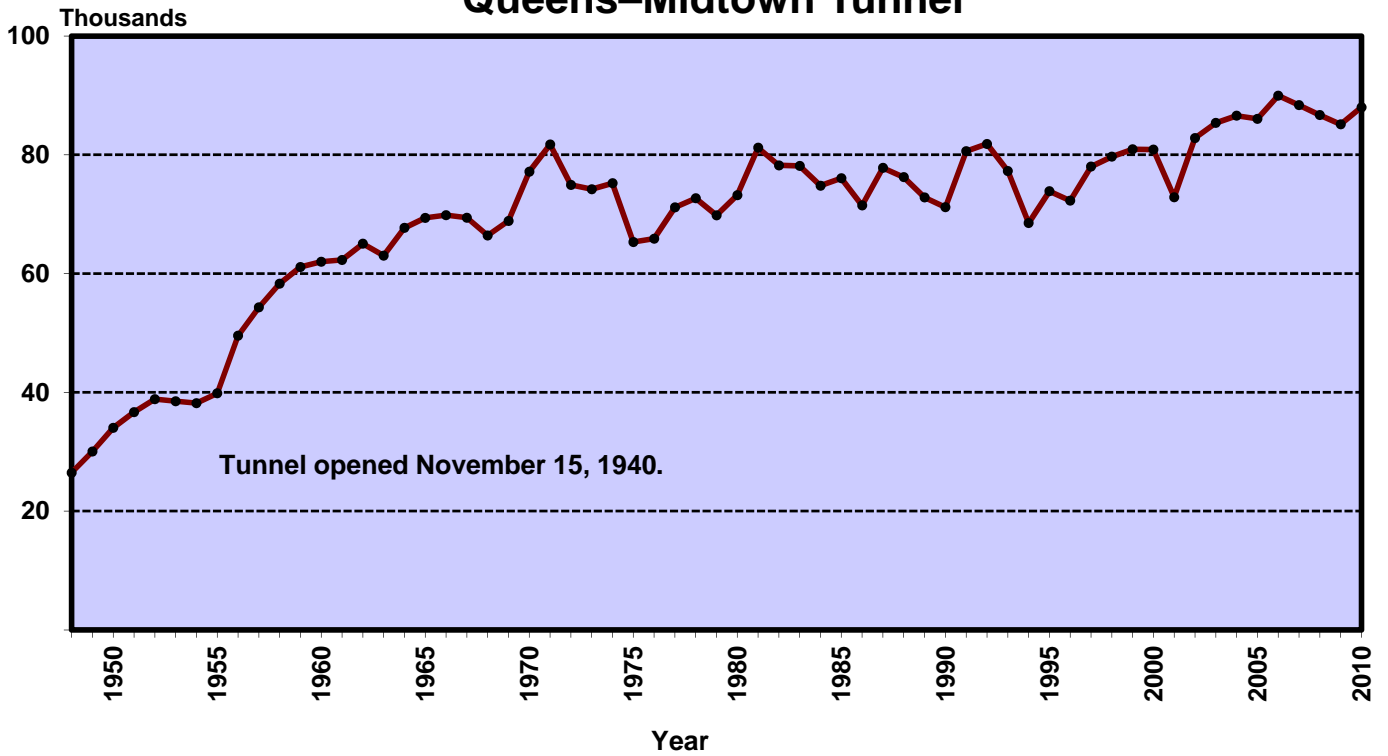
Based on May 2006 Classification Survey Data.

\*\* Peak Volumes

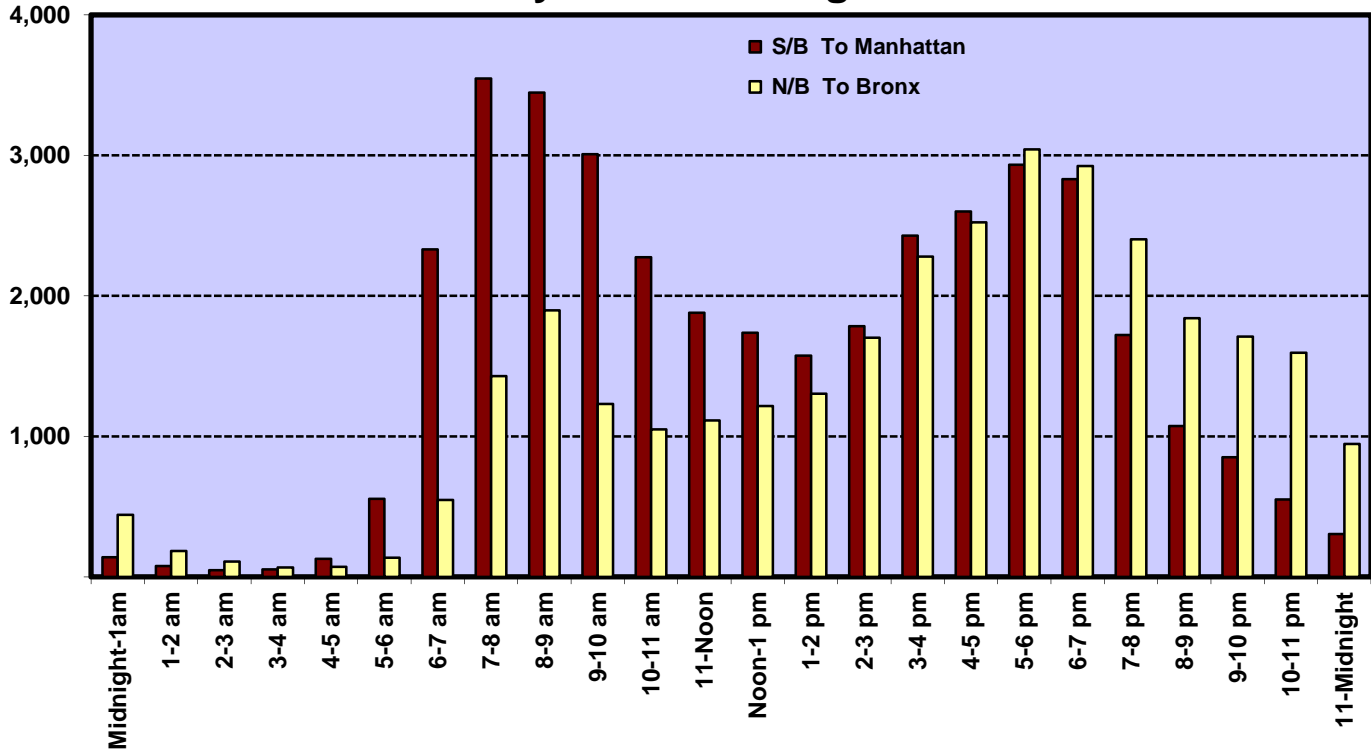
## Hourly Vehicular Volumes Queens-Midtown Tunnel ~ 2010



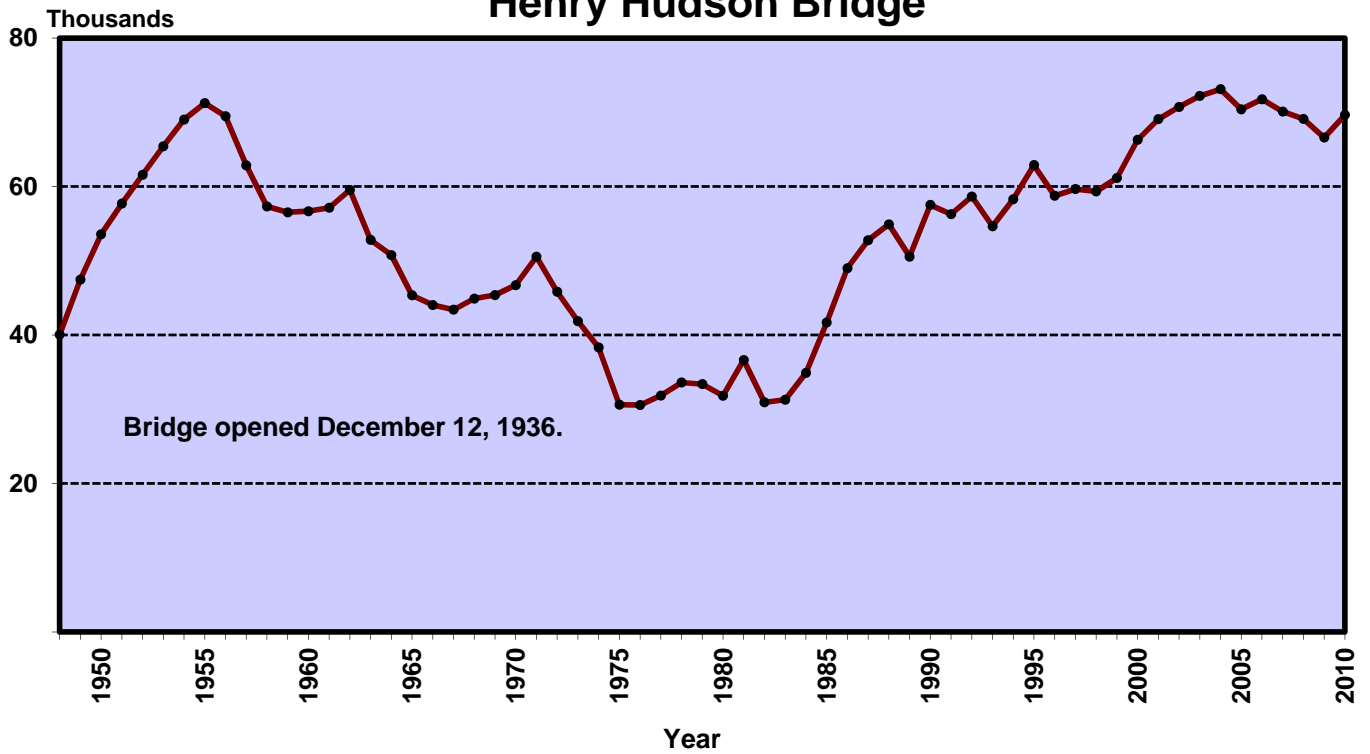
## Average Daily Traffic Volumes ~ Total of Both Directions Queens-Midtown Tunnel



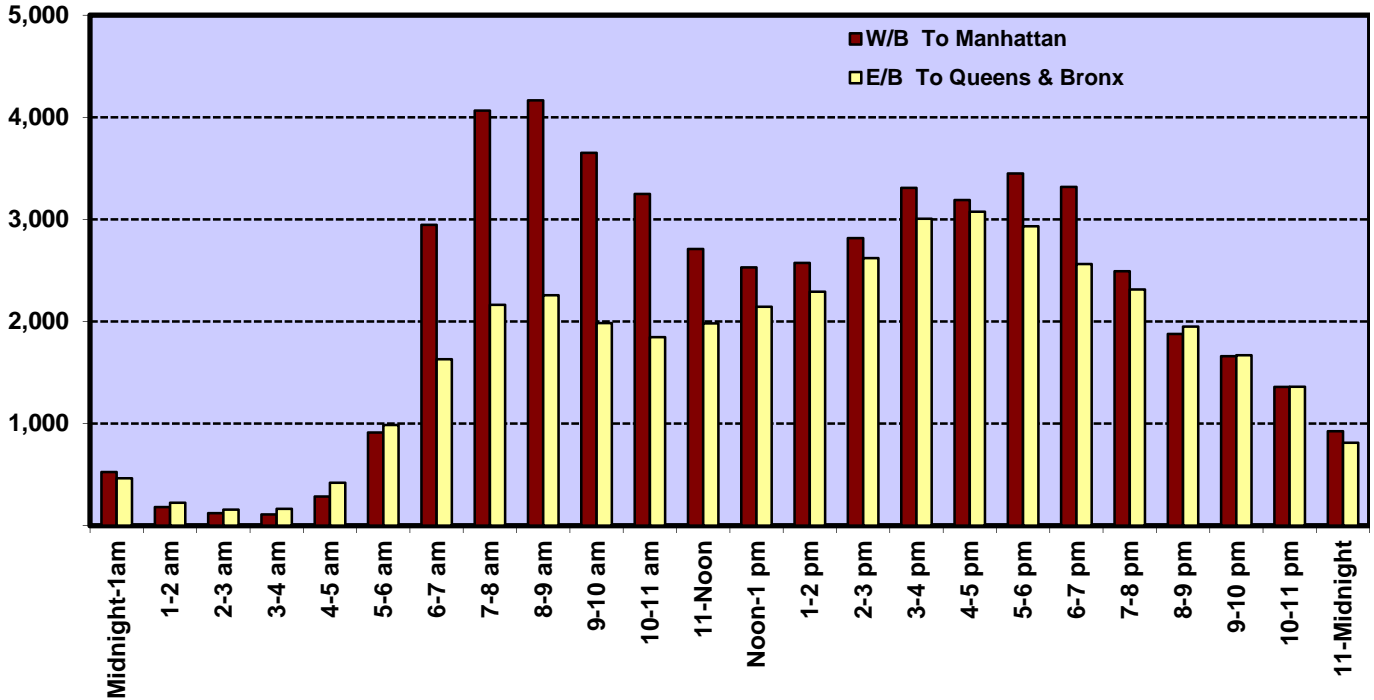
## Hourly Vehicular Volumes Henry Hudson Bridge ~ 2010



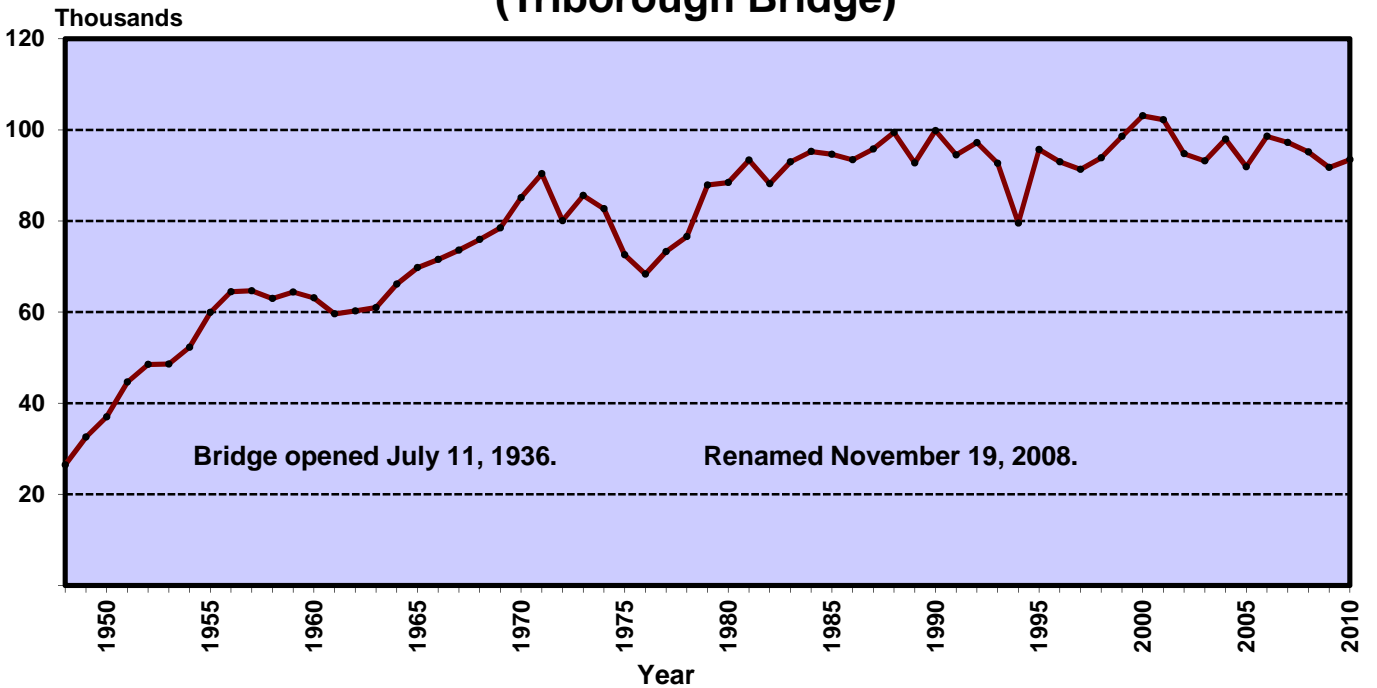
## Average Daily Traffic Volumes ~ Total of Both Directions Henry Hudson Bridge



## Hourly Vehicular Volumes Robert F. Kennedy Memorial Bridge, Manhattan Plaza ~ 2010 (Triborough Bridge)



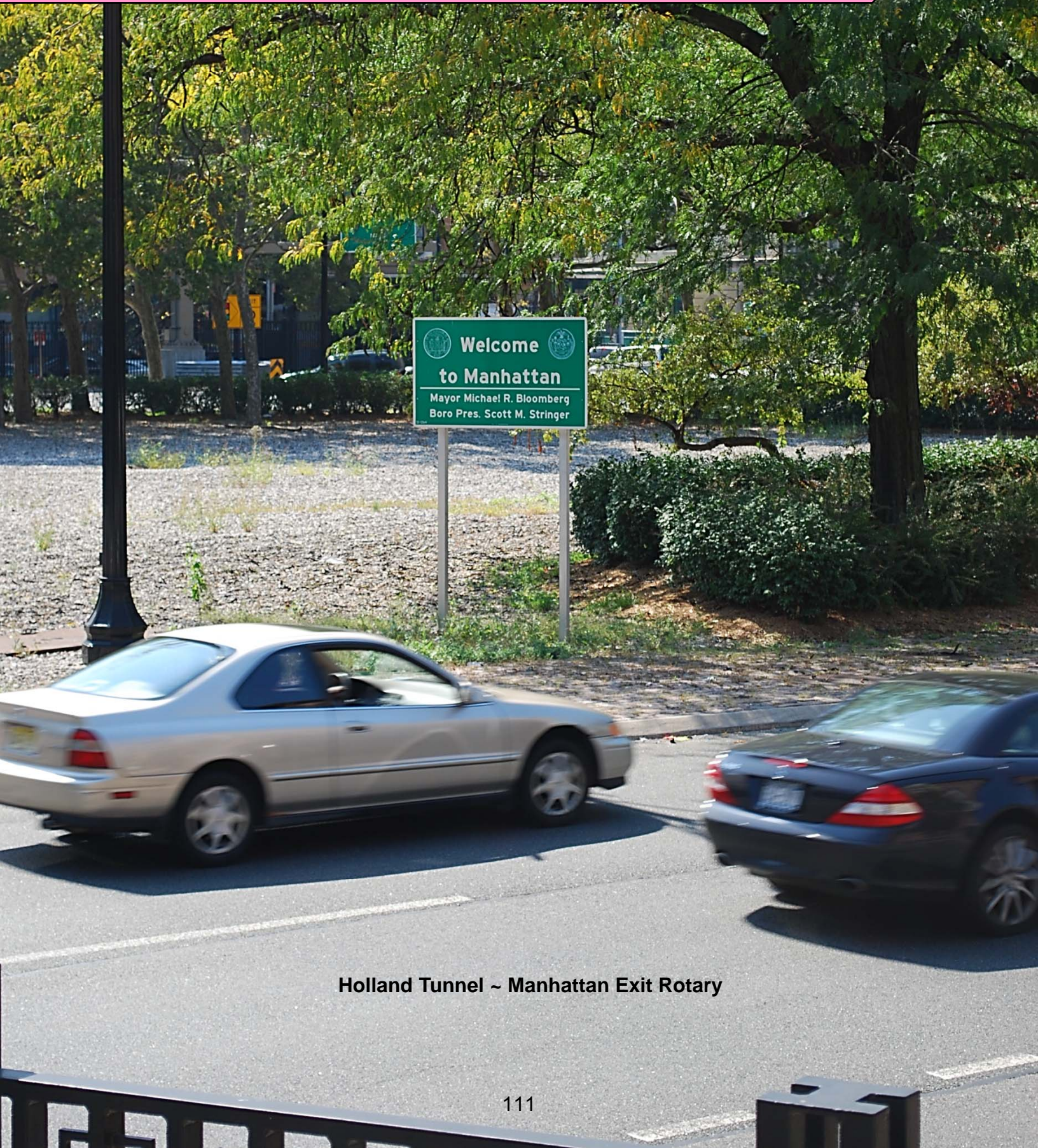
## Average Daily Traffic Volumes ~ Total of Both Directions Robert F. Kennedy Memorial Bridge, Manhattan Plaza (Triborough Bridge)







# PANYNJ Facilities



Holland Tunnel ~ Manhattan Exit Rotary

## PANYNJ Manhattan - New Jersey Facilities

### Average Daily Traffic Volumes

1948 - 2010

Year	<i>George Washington Bridge</i>	<i>Holland Tunnel</i>	<i>Lincoln Tunnel</i>	<i>Totals</i>
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	98,013	55,445	58,468	211,926
1956	97,059	56,961	59,068	213,088
1957	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	155,967	55,060	82,312	293,339
1966	167,304	55,559	81,118	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	211,955	64,765	99,827	376,547
1975	215,927	62,381	96,399	374,707
1976	215,136	64,663	101,451	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	254,728	76,226	110,210	441,164
1984	258,723	71,819	123,233	453,775
1985	275,934	76,121	116,397	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	260,732	92,685	119,652	473,069
1994	259,863	94,637	119,299	473,799
1995	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	310,771	92,557	129,511	532,839
2003	319,029	101,097	127,323	547,449
2004	315,066	96,171	125,159	536,396
2005	304,302	96,960	126,455	527,717
2006	312,078	98,425	127,245	537,748
2007	291,391	100,491	122,092	513,974
2008	293,059	97,057	118,153	508,269
2009	289,694	96,184	118,982	504,860
2010	292,047	94,667	119,832	506,546

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

PANYNJ toll increases May 1975, January 1984, April, 1987, April 1991, March 2001, March 2008.

## Hourly Vehicular Volumes Port Authority of New York & New Jersey 2010

	<i>George Washington Bridge</i>		<i>Holland Tunnel</i>		<i>Lincoln Tunnel</i>		<b>Totals</b>	
	<i>E/B</i>	<i>W/B</i>	<i>E/B</i>	<i>W/B</i>	<i>E/B</i>	<i>W/B</i>	<i>Entering Manhattan</i>	<i>Leaving Manhattan</i>
12-1am	1,893	3,283	752	870	917	2,274	3,562	6,427
1-2am	1,298	1,505	468	737	561	924	2,327	3,166
2-3am	1,080	1,230	346	640	409	582	1,835	2,452
3-4am	1,299	1,171	364	747	426	499	2,089	2,417
4-5am	2,181	1,600	594	1,053	858	566	3,633	3,219
5-6am	6,092	2,885	2,062	1,310	2,664	805	10,818	5,000
6-7am	10,621 **	5,108	3,097 **	2,111	5,053 **	1,375	18,771 **	8,594
7-8am	9,900	6,842	2,965	2,762	4,664	1,874	17,529	11,478
8-9am	8,688	7,595	2,938	2,671	4,385	1,948	16,011	12,214
9-10am	8,580	6,591	2,916	2,190	4,143	1,976	15,639	10,757
10-11am	7,520	6,277	2,631	1,987	3,459	2,309	13,610	10,573
11-12am	7,022	5,500	2,233	1,917	3,053	2,264	12,308	9,681
12-1pm	6,593	6,255	2,088	1,971	2,679	2,441	11,360	10,667
1-2pm	6,661	6,905	2,089	2,287	2,670	3,024	11,420	12,216
2-3pm	7,123	7,815	2,196	2,719	2,751	3,607	12,070	14,141
3-4pm	7,548	10,846	2,506	2,614	2,784	3,767	12,838	17,227
4-5pm	8,123	11,061 **	2,713	2,495	2,271	4,699	13,107	18,255 **
5-6pm	8,459	10,577	2,837	1,691	1,812	5,068 **	13,108	17,336
6-7pm	8,063	10,043	2,898	2,121	2,245	4,965	13,206	17,129
7-8pm	6,760	9,760	2,548	2,680	2,317	4,087	11,625	16,527
8-9pm	5,399	8,693	1,987	2,823 **	2,091	3,781	9,477	15,297
9-10pm	4,621	6,877	1,681	2,510	1,969	3,465	8,271	12,852
10-11pm	3,896	6,224	1,666	2,139	1,870	3,373	7,432	11,736
11-12pm	2,901	5,083	1,252	1,795	1,491	2,617	5,644	9,495
<b>Totals</b>	<b>142,321</b>	<b>149,726</b>	<b>47,827</b>	<b>46,840</b>	<b>57,542</b>	<b>62,290</b>	<b>247,690</b>	<b>258,856</b>
7-10am	27,168	21,028	8,819	7,623	13,192	5,798	49,179	34,449
10am-1pm	21,135	18,032	6,952	5,875	9,191	7,014	37,278	30,921
1-4pm	21,332	25,566	6,791	7,620	8,205	10,398	36,328	43,584
4-7pm	24,645	31,681	8,448	6,307	6,328	14,732	39,421	52,720
7am-7pm	94,280	96,307	31,010	27,425	36,916	37,942	162,206	161,674
6-10am	37,789	26,136	11,916	9,734	18,245	7,173	67,950	43,043
3-7pm	32,193	42,527	10,954	8,921	9,112	18,499	52,259	69,947
6am-7pm	104,901	101,415	34,107	29,536	41,969	39,317	180,977	170,268

\*\* Peak Volumes

Note: NYC DOT uses the averages of vehicular volumes from selected representative fall weekdays. Publications from other sources may be based on alternative computation methodologies, yielding different results for some facilities, notably the tolled bridges and tunnels.

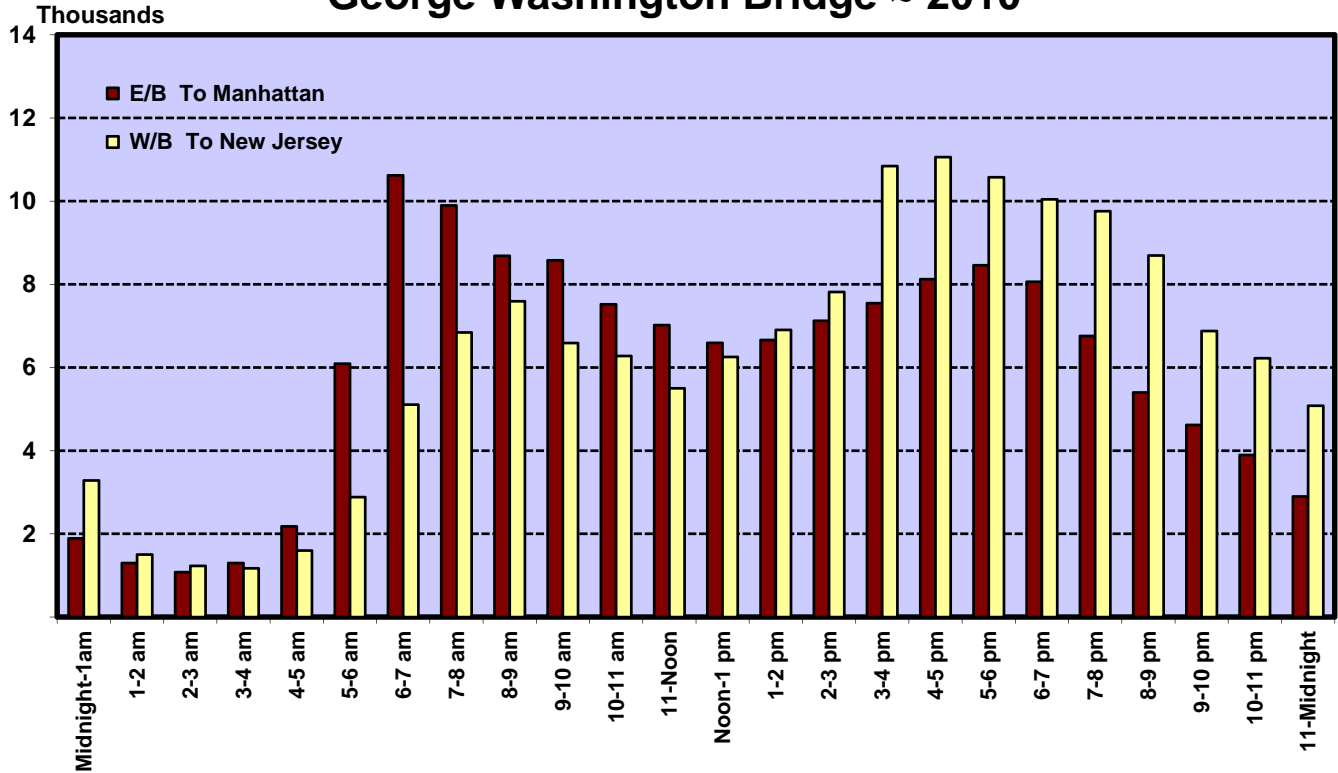
## Hourly Vehicular Volumes George Washington Bridge - 2010

	<i>Eastbound to Manhattan</i>					<i>Westbound to New Jersey</i>					<b>2-Way Grand Totals</b>
	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles	
12-1am	1,548	16	47	282	1,893	2,866	12	44	361	3,283	5,176
1-2am	932	10	55	301	1,298					1,505	2,803
2-3am	649	6	68	357	1,080					1,230	2,310
3-4am	743	8	92	456	1,299					1,171	2,470
4-5am	1,402	10	146	623	2,181					1,600	3,781
5-6am	5,003	34	310	745	6,092	2,179	11	323	372	2,885	8,977
6-7am	9,597	76	416	532	10,621	4,380	51	316	361	5,108	15,729
7-8am	9,097	106	321	376	9,900	5,977	73	388	404	6,842	16,742
8-9am	7,923	100	314	351	8,688	6,770	102	341	382	7,595	16,283
9-10am	7,732	91	339	418	8,580	5,566	97	341	587	6,591	15,171
10-11am	6,719	80	312	409	7,520	5,157	67	390	663	6,277	13,797
11-12am	6,240	70	299	413	7,022	4,532	42	344	582	5,500	12,522
12-1pm	5,849	74	282	388	6,593	5,199	45	318	693	6,255	12,848
1-2pm	5,971	72	266	352	6,661	5,892	49	635	329	6,905	13,566
2-3pm	6,460	85	252	326	7,123	6,877	51	347	540	7,815	14,938
3-4pm	6,929	103	232	284	7,548	9,814	55	428	549	10,846	18,394
4-5pm	7,577	121	193	232	8,123	10,134	83	391	453	11,061	19,184
5-6pm	7,987	117	144	211	8,459	9,797	69	267	444	10,577	19,036
6-7pm	7,640	95	117	211	8,063	9,410	87	223	323	10,043	18,106
7-8pm	6,349	85	96	230	6,760	9,157	49	166	388	9,760	16,520
8-9pm	4,983	68	80	268	5,399	8,123	43	107	420	8,693	14,092
9-10pm	4,242	51	70	258	4,621	6,424	32	68	353	6,877	11,498
10-11pm	3,537	34	59	266	3,896	5,822	21	52	329	6,224	10,120
11-12pm	2,570	25	44	262	2,901	4,668	28	58	329	5,083	7,984
<b>Totals</b>	<b>127,679</b>	<b>1,537</b>	<b>4,554</b>	<b>8,551</b>	<b>142,321</b>					<b>149,726</b>	<b>292,047</b>
7-10am	24,752	297	974	1,145	27,168	18,313	272	1,070	1,373	21,028	48,196
10am-1pm	18,808	224	893	1,210	21,135	14,888	154	1,052	1,938	18,032	39,167
1-4pm	19,360	260	750	962	21,332	22,583	155	1,410	1,418	25,566	46,898
4-7pm	23,204	333	454	654	24,645	29,341	239	881	1,220	31,681	56,326
7am-7pm	86,124	1,114	3,071	3,971	94,280	85,125	820	4,413	5,949	96,307	190,587
6-10am	34,349	373	1,390	1,677	37,789	22,693	323	1,386	1,734	26,136	63,925
3-7pm	30,133	436	686	938	32,193	39,155	294	1,309	1,769	42,527	74,720
6am-7pm	95,721	1,190	3,487	4,503	104,901	89,505	871	4,729	6,310	101,415	206,316

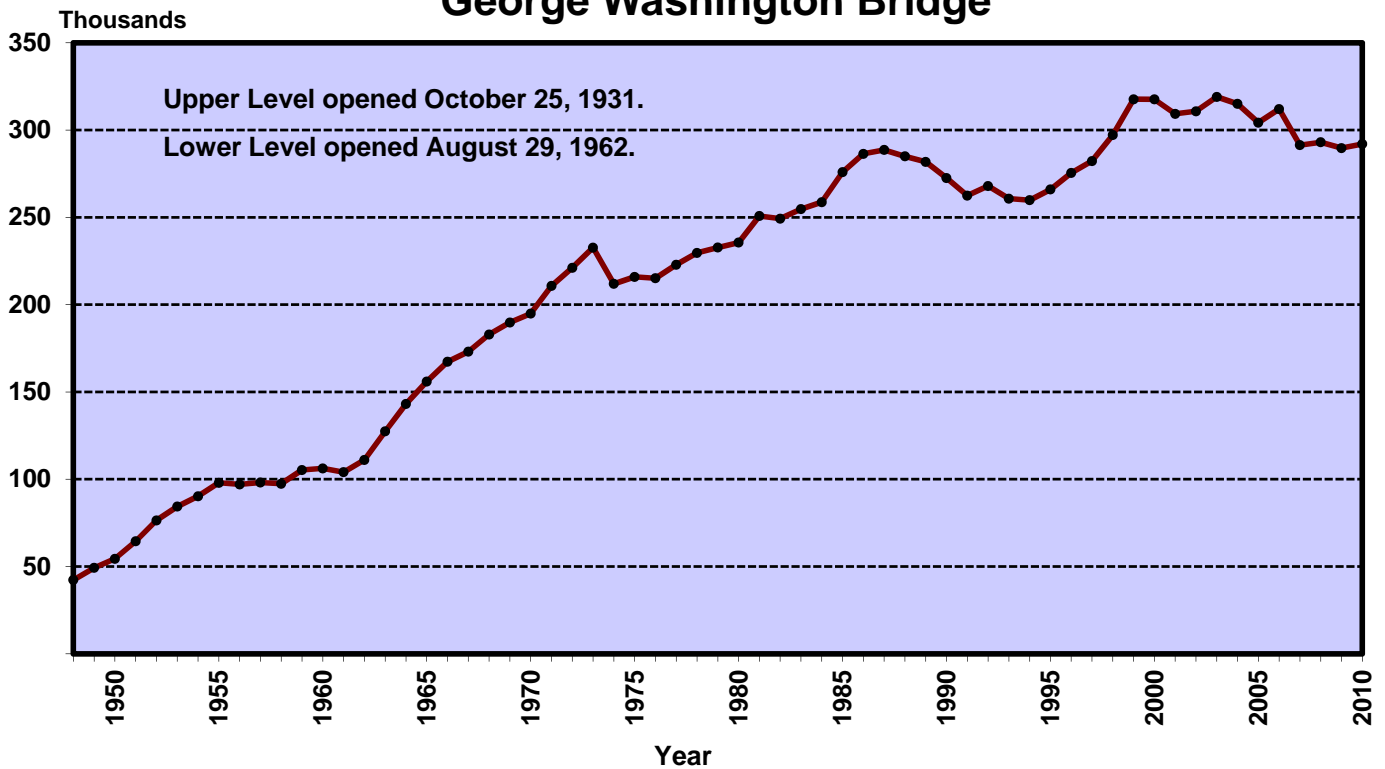
Classification based on October-November 2010 Data.

\*\* Peak Volumes

## Hourly Vehicular Volumes George Washington Bridge ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions George Washington Bridge



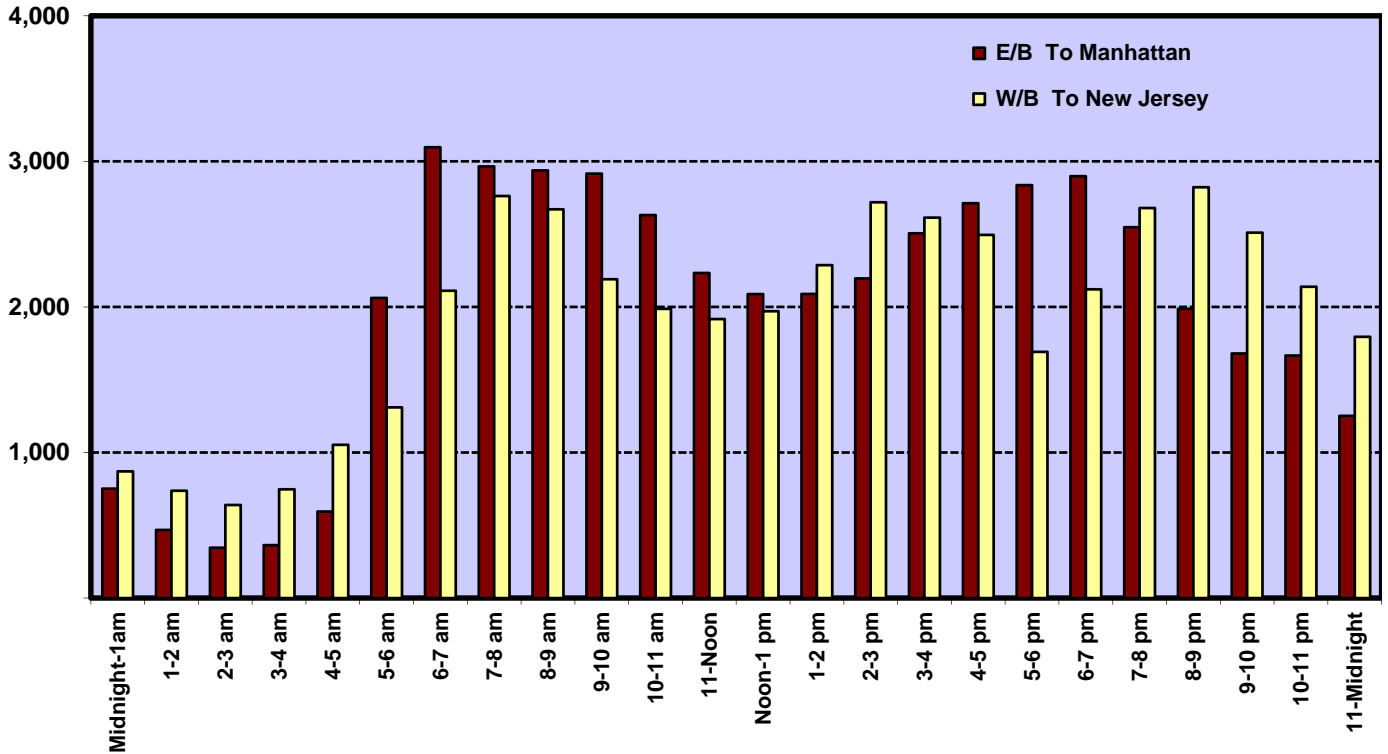
**Hourly Vehicular Volumes  
Holland Tunnel - 2010**

	<i>Eastbound to Manhattan</i>					<i>Westbound to New Jersey</i>					<b>2-Way Grand Totals</b>
	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles	
12-1am	726	12	14	0	752	856	2	10	2	870	1,622
1-2am	438	7	23	0	468					737	1,205
2-3am	307	5	33	1	346					640	986
3-4am	300	4	59	1	364					747	1,111
4-5am	537	8	48	1	594					1,053	1,647
5-6am	1,962	21	78	1	2,062	1,237	8	64	1	1,310	3,372
6-7am	2,961	60	75	1	3,097	1,979	34	98	0	2,111	5,208
7-8am	2,837	57	70	1	2,965	2,621	44	96	1	2,762	5,727
8-9am	2,797	58	82	1	2,938	2,509	62	100	0	2,671	5,609
9-10am	2,796	53	66	1	2,916	1,983	80	127	0	2,190	5,106
10-11am	2,527	34	69	1	2,631	1,776	31	175	5	1,987	4,618
11-12am	2,146	25	61	1	2,233	1,747	17	153	0	1,917	4,150
12-1pm	2,011	27	49	1	2,088	1,829	15	127	0	1,971	4,059
1-2pm	2,005	31	52	1	2,089	2,128	11	138	10	2,287	4,376
2-3pm	2,108	38	49	1	2,196	2,554	15	142	8	2,719	4,915
3-4pm	2,398	62	45	1	2,506	2,451	16	147	0	2,614	5,120
4-5pm	2,581	93	39	0	2,713	2,370	35	89	1	2,495	5,208
5-6pm	2,730	81	26	0	2,837	1,620	21	50	0	1,691	4,528
6-7pm	2,805	69	23	1	2,898	2,045	32	42	2	2,121	5,019
7-8pm	2,489	36	22	1	2,548	2,612	17	49	2	2,680	5,228
8-9pm	1,938	28	20	1	1,987	2,773	19	31	0	2,823	4,810
9-10pm	1,642	16	23	0	1,681	2,478	14	17	1	2,510	4,191
10-11pm	1,628	20	18	0	1,666	2,096	19	21	3	2,139	3,805
11-12pm	1,230	11	11	0	1,252	1,765	5	15	10	1,795	3,047
Totals	45,899	856	1,055	17	47,827					46,840	94,667
7-10am	8,430	168	218	3	8,819	7,113	186	323	1	7,623	16,442
10am-1pm	6,684	86	179	3	6,952	5,352	63	455	5	5,875	12,827
1-4pm	6,511	131	146	3	6,791	7,133	42	427	18	7,620	14,411
4-7pm	8,116	243	88	1	8,448	6,035	88	181	3	6,307	14,755
7am-7pm	29,741	628	631	10	31,010	25,633	379	1,386	27	27,425	58,435
6-10am	11,391	228	293	4	11,916	9,092	220	421	1	9,734	21,650
3-7pm	10,514	305	133	2	10,954	8,486	104	328	3	8,921	19,875
6am-7pm	32,702	688	706	11	34,107	27,612	413	1,484	27	29,536	63,643

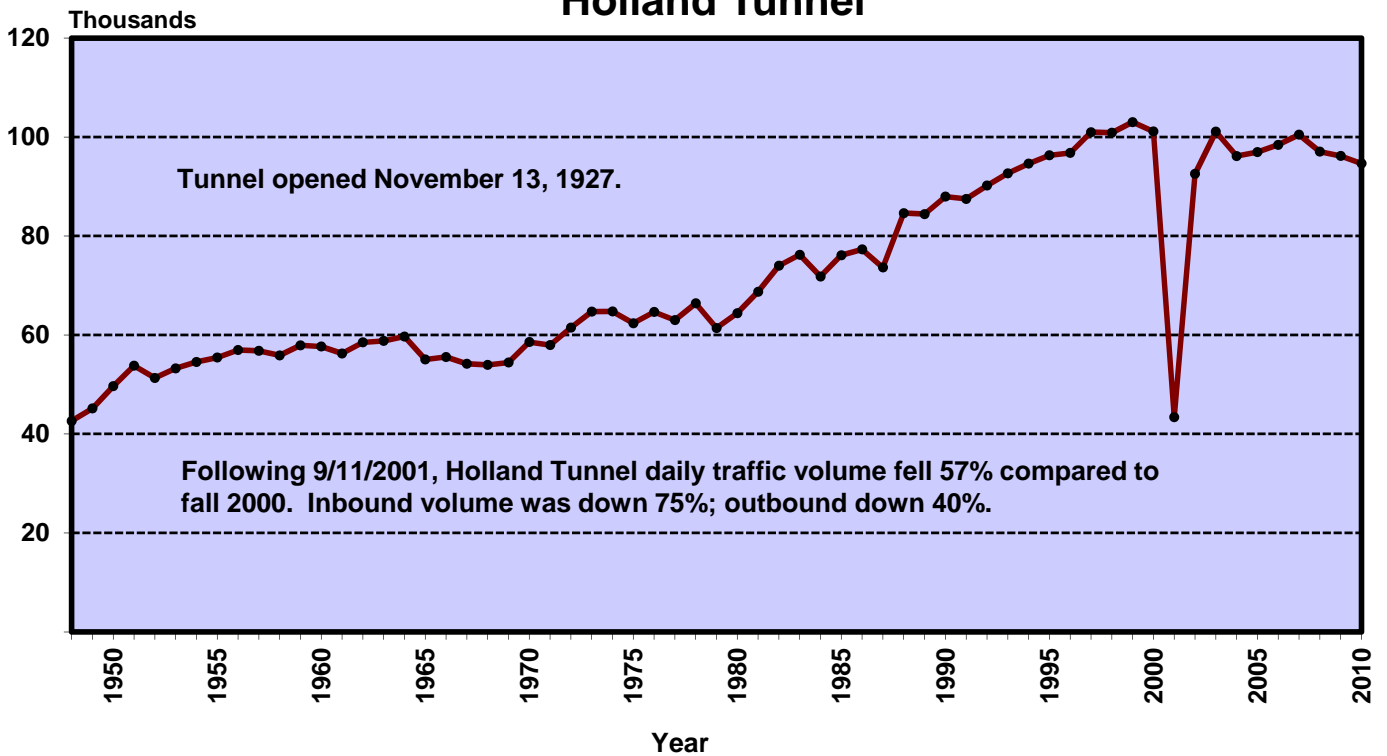
Classification based on October-November 2010 Data.

\*\* Peak Volumes

## Hourly Vehicular Volumes Holland Tunnel ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions Holland Tunnel



## Hourly Vehicular Volumes Lincoln Tunnel - 2010

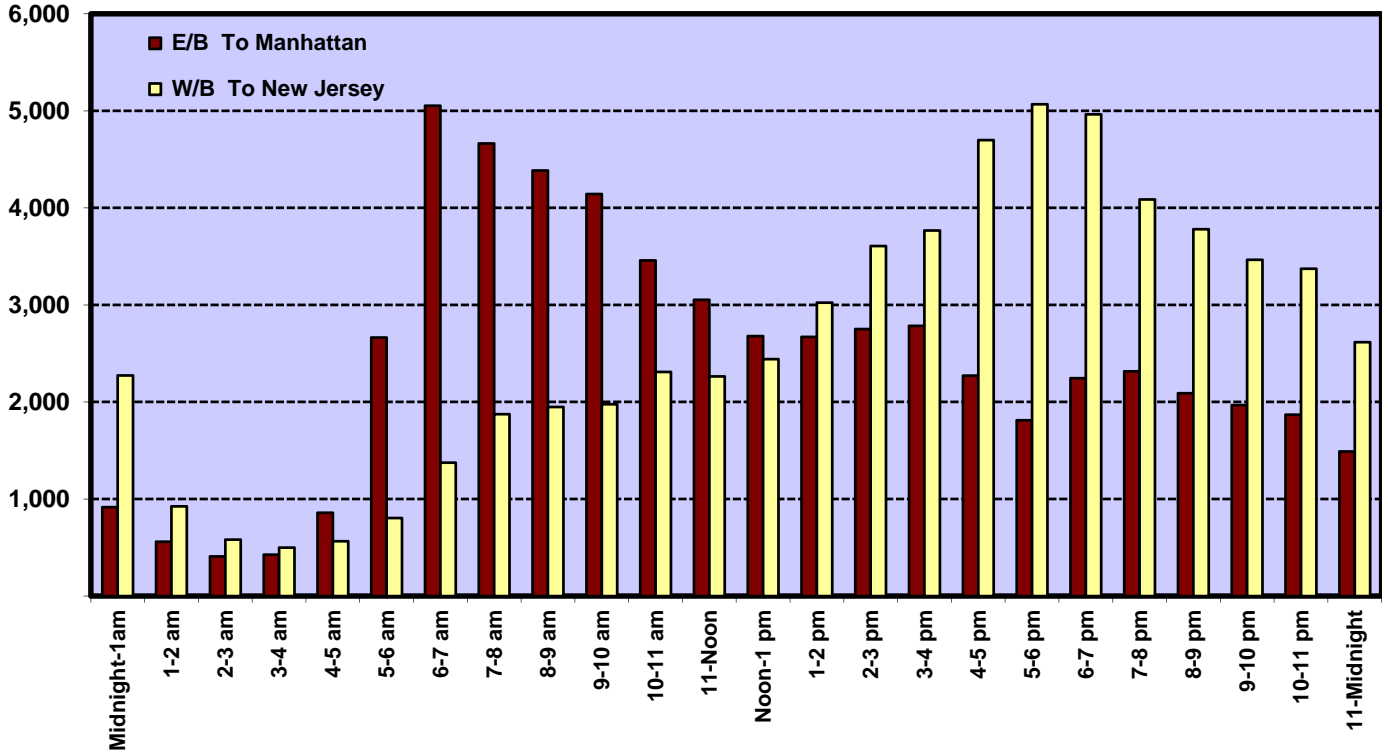
	<i>Eastbound to Manhattan</i>					<i>Westbound to New Jersey</i>					<b>2-Way Grand Totals</b>	
	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles		
12-1am	788	65	42	22	917	2,067	93	69	45	2,274	3,191	
1-2am	468	29	40	24	561					924	1,485	
2-3am	326	13	47	23	409					582	991	
3-4am	319	11	64	32	426					499	925	
4-5am	612	29	140	77	858					566	1,424	
5-6am	2,115	158	298	93	2,664	579	45	92	89	805	3,469	
6-7am	4,138	468	385	62	5,053	**	1,007	234	84	50	1,375	6,428
7-8am	3,510	811	310	33	4,664	1,251	444	112	67	1,874	6,538	
8-9am	3,138	916	310	21	4,385	1,096	663	136	53	1,948	6,333	
9-10am	3,279	594	248	22	4,143	1,146	614	186	30	1,976	6,119	
10-11am	2,956	276	206	21	3,459	1,608	400	240	61	2,309	5,768	
11-12am	2,650	224	161	18	3,053	1,727	209	257	71	2,264	5,317	
12-1pm	2,327	197	141	14	2,679	1,957	183	260	41	2,441	5,120	
1-2pm	2,287	243	127	13	2,670	2,455	185	340	44	3,024	5,694	
2-3pm	2,329	287	125	10	2,751	3,053	206	296	52	3,607	6,358	
3-4pm	2,295	391	91	7	2,784	3,224	251	262	30	3,767	6,551	
4-5pm	1,671	528	67	5	2,271	4,024	404	241	30	4,699	6,970	
5-6pm	1,397	370	41	4	1,812	4,180	681	191	16	5,068	**	6,880
6-7pm	1,783	410	46	6	2,245	4,133	690	122	20	4,965	**	7,210
7-8pm	1,936	317	55	9	2,317	3,524	478	79	6	4,087	6,404	
8-9pm	1,783	231	59	18	2,091	3,381	294	79	27	3,781	5,872	
9-10pm	1,694	180	67	28	1,969	3,140	224	67	34	3,465	5,434	
10-11pm	1,625	154	67	24	1,870	3,098	179	71	25	3,373	5,243	
11-12pm	1,299	109	60	23	1,491	2,371	133	67	46	2,617	4,108	
<b>Totals</b>	<b>46,725</b>	<b>7,011</b>	<b>3,197</b>	<b>609</b>	<b>57,542</b>					<b>62,290</b>	<b>119,832</b>	
7-10am	9,927	2,321	868	76	13,192	3,493	1,721	434	150	5,798	18,990	
10am-1pm	7,933	697	508	53	9,191	5,292	792	757	173	7,014	16,205	
1-4pm	6,911	921	343	30	8,205	8,732	642	898	126	10,398	18,603	
4-7pm	4,851	1,308	154	15	6,328	12,337	1,775	554	66	14,732	21,060	
7am-7pm	29,622	5,247	1,873	174	36,916	29,854	4,930	2,643	515	37,942	74,858	
6-10am	14,065	2,789	1,253	138	18,245	4,500	1,955	518	200	7,173	25,418	
3-7pm	7,146	1,699	245	22	9,112	15,561	2,026	816	96	18,499	27,611	
6am-7pm	33,760	5,715	2,258	236	41,969	30,861	5,164	2,727	565	39,317	81,286	

Classification based on October-November 2010 Data.

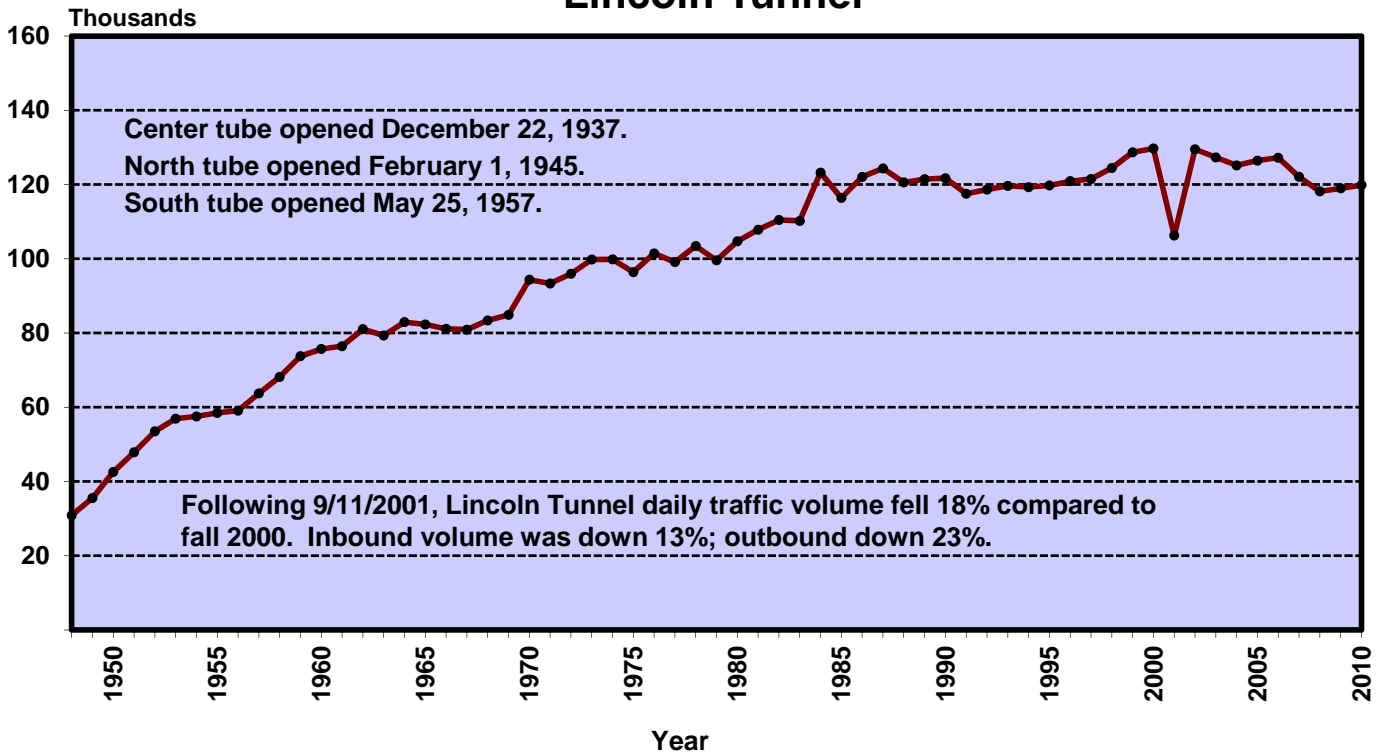
\*\* Peak Volumes



## Hourly Vehicular Volumes Lincoln Tunnel ~ 2010



## Average Daily Traffic Volumes ~ Total of Both Directions Lincoln Tunnel





# **APPENDIX**

## **2010 Bridge and Tunnel Reconstruction**



# APPENDIX

## Major Bridge & Tunnel Reconstruction In 2010

### *Brooklyn Bridge*

Eastbound lane closures were in effect as follows.

01/01 – 03/19:	11:00pm–6:00am	Mon–Fri	1 e/b lane closed as needed,
	10:00am–3:00pm	Mon–Fri	1 e/b lane closed as needed,
	2:00am–2:00pm	Sat–Sun	1 e/b lane closed as needed.
03/20 – 07/09:	11:00pm–6:00am	Mon–Fri	1 e/b lane closed as needed,
	2:00am–6:00am	Mon–Fri	1 or 2 e/b lanes closed as needed,
	10:00am–3:00pm	Mon–Fri	1 e/b lane closed as needed,
	2:00am–2:00pm	Sat	1 e/b lane closed as needed,
	3:00am–7:00am	Sat	1 or 2 e/b lanes closed as needed,
	2:00am–2:00pm	Sun	1 e/b lane closed as needed,
	3:00am–9:00am	Sun	1 or 2 e/b lanes closed as needed.
07/10 – 08/22:	11:00pm–6:00am	Mon–Fri	1 e/b lane closed as needed,
	10:00am–3:00pm	Mon–Fri	1 e/b lane closed as needed,
	2:00am–2:00pm	Sat–Sun	1 e/b lane closed as needed.
08/23 – 10/29:	10:00am–3:00pm	Mon–Fri	1 e/b lane closed as needed.
10/30 – 11/19:	1:00am–6:00am	Mon–Sat	1 e/b lane closed,
	10:00am–3:00pm	Mon–Fri	1 e/b lane closed as needed.
11/20 – 12/23:	1:00am–6:00am	Mon–Sat	2 e/b lanes closed,
	10:00am–3:00pm	Mon–Fri	1 e/b lane closed as needed.
12/24 – 12/31:	10:00am–3:00pm	Mon–Sat	1 e/b lane closed as needed.

Westbound lane closures were in effect as follows.

03/20 – 06/18:	11:00pm–6:00am	Sun–Fri	1 w/b lane closed as needed,
	12:01am–5:00am	Mon–Fri	1 or 2 w/b lanes closed as needed,
	10:00am–3:00pm	Mon–Fri	1 w/b lane closed as needed,
	1:00am–7:00am	Sat	1 w/b lane closed as needed,
	2:00am–6:00am	Sat	1 or 2 w/b lanes closed as needed,
	1:00am–9:00am	Sun	1 w/b lane closed as needed,
	2:00am–6:00am	Sun	1 or 2 w/b lanes closed as needed.
06/19 – 08/22:	11:00pm–6:00am	Sun–Fri	1 or 2 w/b lanes closed as needed,
	10:00am–3:00pm	Mon–Fri	1 w/b lane closed as needed,
	1:00am–7:00am	Sat	1 w/b lane closed as needed,
	2:00am–6:00am	Sat	1 or 2 w/b lanes closed as needed,
	1:00am–9:00am	Sun	1 w/b lane closed as needed,
	2:00am–6:00am	Sun	1 or 2 w/b lanes closed as needed.

As of Monday night, August 23, the bridge was **closed to Manhattan-bound traffic** during the following hours. The bridge remained open to pedestrians and bicyclists during all hours.

08/23 – 09/24: 11:00pm–6:00am Sun-Fri Bridge closed Manhattan-bound,  
12:01am–7:00am Sat Bridge closed Manhattan-bound,  
12:01am-9:00am Sun Bridge closed Manhattan-bound.  
*No closure Labor Day Weekend Sat-Sun-Mon.*  
*No closure Saturday, September 11.*

12/11 – 12/31: 11:00pm–6:00am Sun-Fri 1 w/b lane closed as needed.

From October 30 to November 17, The Centre Street and Park Place entrances to the Brooklyn-bound roadway were closed overnight Monday to Saturday mornings from 1:00am to 6:00am

## ***Manhattan Bridge***

### **Manhattan Bridge Operation: All 2010 Except as Noted.**

North bikeway and south walkway open.

- **6:00am – 10:00am Weekdays.**
  - Four or five lanes open westbound: two lanes on the north upper roadway (no trucks), and two or three lanes on the lower roadway for all vehicle types.
  - Left lane of the north upper roadway reserved for **buses and HOVs**.
  - Two lanes open eastbound on the south upper roadway.
- **10:00am – 2:00pm Weekdays.**
  - Between three and five lanes open westbound: one or two lanes on the north upper roadway (no trucks), and one to three lanes on the lower roadway for all vehicle types.
  - Two lanes open eastbound on the south upper roadway.
- **2:00pm – 3:00pm Weekdays.**
  - Two lanes open westbound on the north upper roadway.
  - Two lanes open eastbound on the south upper roadway.
  - Lower roadway closed for reversal.
- **3:00pm – 5:00am Weekdays.**
  - Two lanes open westbound on the north upper roadway.
  - Four or five lanes open eastbound: two lanes on the south upper roadway, and two or three lanes on the lower roadway.
- **9:00pm Friday – 10:00am Monday.**
  - Four or five lanes open westbound: two lanes on the north upper roadway, and two or three lanes on the lower roadway.
  - Two lanes open eastbound on the south upper roadway.

- Five lanes open westbound: two lanes on the north upper roadway, and three lanes on the lower roadway.
- Two lanes open eastbound on the south upper roadway.
- **NOTE: When the Brooklyn Bridge was closed to Manhattan-bound traffic there were 5 lanes eastbound and 2 lanes westbound from 3pm to 9pm Monday to Friday. From 9pm to 10am weekdays there were 5 lanes westbound and 2 lanes eastbound.**
- **Lower Roadway.**
  - Available to all vehicle types at all times.
  - Manhattan-bound 5:00am – 2:00pm weekdays, and 9:00pm Friday to 5:00am Monday.
  - Closed for reversal approximately 2:00pm – 3:00pm weekdays.
  - Brooklyn-bound 3:00pm – 5:00am weekdays.
  - Manhattan-bound trucks required to use the lower roadway weekdays 5:00am – 2:00pm.
  - Access to westbound Canal Street in Manhattan.
  - Off-peak lane closures as needed on the lower roadway.
- **North Upper Roadway.**
  - Manhattan-bound all hours.
  - No trucks weekdays 5:00am – 2:00pm.
  - Left lane reserved for **buses and HOVs** weekdays 6:00am – 10:00am. Access to the HOV lane is from Brooklyn–Queens Expressway eastbound exit 29A, from Nassau Street, and from Flatbush Avenue–Tillary Street.
  - Single-occupant cars permitted only in the right lane weekdays 6:00am– 10:00am, with access from Brooklyn–Queens Expressway eastbound exit 29A and from Nassau Street. Single-occupant cars are not permitted to access the north upper roadway from Flatbush Avenue–Tillary Street during these hours.
  - When the lower roadway is Manhattan-bound, access in Manhattan from the north upper roadway is to northbound Chrystie Street and eastbound Canal Street only, with no access to westbound Canal Street from the north upper roadway during these hours. Drivers seeking access to westbound Canal Street during these hours must use the lower roadway.
  - From January 1 to July 30, the right turn lane from the North Upper Roadway (Manhattan-bound) onto eastbound Canal Street was closed 9pm to 2pm Sunday night to Friday afternoon, and was also closed as needed 9pm Friday to 5am Monday (passenger cars were allowed to turn right from the center lane onto eastbound Canal Street). Trucks and buses were prohibited from turning right onto eastbound Canal Street and were advised to follow the posted detour via Chrystie Street, Grand Street, and Allen Street for access to eastbound Canal Street.
  - The North Upper Roadway was **closed** as follows.
    - 06/07 – 06/17: 12:01am-5:00am weeknights.
    - 06/05 – 06/28 12:01am Sat. – 5:00am Mon.
  - Overnight and weekend lane closures as needed on the Manhattan-bound north upper roadway.

- **South Upper Roadway.**
  - Brooklyn-bound all hours for all vehicle types.
  - Off-peak lane closures as needed on the south upper roadway.
- **NOTE: When the Brooklyn Bridge was closed to Manhattan-bound traffic there were 5 lanes eastbound and 2 lanes westbound on the Manhattan Bridge from 3pm to 9pm Monday to Friday. From 9pm to 10am weekdays there were 5 lanes westbound and 2 lanes eastbound.**

## ***Queensboro Bridge***

Throughout 2010, **trucks** were permitted only on the two Lower Inner Roadways.

Throughout 2010, 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.

Throughout 2010, the North Outer Roadway was reserved for **bicyclists and pedestrians**.

The North Upper Roadway was closed as follows:

06/12 – 06/27:	5:00am – 2:00pm	Sat-Sun.	Roadway closed.
07/10 – 07/11:	5:00am – 2:00pm	Sat-Sun.	Roadway closed.

*South Upper Roadway reversed to W/B and all Lower Roadway lanes open during these hours.*

The South Outer Roadway was closed intermittently as follows:

04/03 – 04/16:	1:00am – 5:30am	Mon–Fri.	Roadway closed as needed.
07/17 – 09/30:	1:00am – 5:00am	Mon–Fri.	Roadway closed as needed.
10/01 – 12/15:	1:00am – 6:00am	Mon–Fri.	Roadway closed as needed.

Throughout 2010, there were additional intermittent closings of single lanes on individual roadways of the Queensboro Bridge during off-peak hours.

### **Queensboro Bridge Operation: All 2010 except as noted.**

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).



## ***Williamsburg Bridge***

Throughout 2010, **trucks** were permitted only on the outer roadways.

Pedestrian and bicycle access was maintained on the bridge at all times throughout 2010.

### **Williamsburg Bridge Operation: All 2010, Except certain weekends as noted below.**

- **Mon–Fri 6:00am – 10:00am.**  
Manhattan-bound: 4 lanes.  
Brooklyn-bound: 2 lanes.
- **Mon–Fri 10:00am – 3:00pm.**  
Manhattan-bound: 3 lanes.  
Brooklyn-bound: 2 lanes.
- **All other times.**  
Manhattan-bound: 4 lanes.  
Brooklyn-bound: 4 lanes.

### **Weekend Operation: Jan. 23 – Feb. 6, Feb. 20, 2010.**

- **Sat. 5:00am – 8:00pm.**  
Manhattan-bound: 4 lanes.  
Brooklyn-bound: 2 lanes.  
*One lane closed on South Inner & South Outer Roadways;*

### **Weekend Operation: June 26-27, 2010.**

- **Sat-Sun 2:00am – Noon.**  
Manhattan-bound: 4 lanes.  
Brooklyn-bound: 2 lanes. *South Inner Roadway closed.*

### **Weekend Operation: July 10-18, 2010.**

- **Sat-Sun 3:00am – 3:00pm.**  
Manhattan-bound: 3 lanes.  
Brooklyn-bound: 2 lanes.  
*North Outer Rdwy closed and 1 North Inner Rdwy lane closed.  
South Inner Roadway reversed to Manhattan-bound.  
Manhattan-bound trucks banned from the bridge.*
- **3:00pm – 8:00pm.**  
Manhattan-bound: 2 lanes.  
Brooklyn-bound: 4 lanes.  
*One lane closed on North Inner & North Outer Roadways.*

### **Weekend Operation: July 24 – August 1, 2010.**

- **Sat-Sun 3:00am – 3:00pm.**  
Manhattan-bound: 2 lanes.  
Brooklyn-bound: 3 lanes.  
*South Inner Rdwy closed and 1 South Outer Rdwy lane closed.  
North Inner Roadway reversed to Brooklyn-bound.  
Brooklyn-bound trucks banned from the bridge.*

**3:00pm – 8:00pm.**

Manhattan-bound: 4 lanes.

Brooklyn-bound: 2 lanes.

*One lane closed on South Inner & South Outer Roadways.*

**Weekend Operation: August 7-8, 2010.**

- **Sat-Sun 3:00am – 3:00pm.**

Manhattan-bound: 2 lanes.

Brooklyn-bound: 3 lanes.

*South Outer Rdwy closed and 1 South Inner Rdwy lane closed.*

*North Inner Roadway reversed to Brooklyn-bound.*

*Brooklyn-bound trucks banned from the bridge.*

**3:00pm – 8:00pm.**

Manhattan-bound: 4 lanes.

Brooklyn-bound: 2 lanes.

*One lane closed on South Inner & South Outer Roadways.*

**Weekend Operation: August 14-15, 2010.**

- **Sat-Sun 3:00am – 3:00pm.**

Manhattan-bound: 4 lanes.

Brooklyn-bound: 2 lanes.

*South Outer Rdwy closed.*

*Brooklyn-bound trucks banned from the bridge.*

### ***Third Avenue Bridge (Harlem River)***

The bridge was closed overnight from 1:00am to 6:00am on Saturday morning, December 18, 2010.

### ***Washington Bridge***

Throughout 2010, the ramp from the eastbound Trans-Manhattan Expressway (I-95) to the Washington Bridge was closed round-the-clock.

From July 17 to December 31, one lane in each direction was closed weeknights from 12:01am to 6:00am.

### ***Willis Avenue Bridge***

From January 1 to August 27, the left lane on the north side of the bridge was closed round-the-clock. The right and center lanes continued to Willis Avenue or Bruckner Boulevard.

From January 26 to March 12, the right lane on the north side of the bridge was also closed round-the-clock. The right and center lanes continued to Willis Avenue or Bruckner Boulevard.

On Saturday, October 2, the entire bridge was closed from 2:00am to 7:00am to complete construction activities necessary for the transfer of traffic onto the **new bridge structure**. Motorists were detoured to the Madison Avenue Bridge during this period.

Two of four lanes on the main bridge were closed intermittently as follows.

01/01-10/02: 12:01am – 6:00am Weeknights;  
1:00am – 7:00am Sat.

Throughout 2010, the pedestrian access at First Avenue and East 125<sup>th</sup> Street was closed, and a temporary access stairway was available at First Avenue and East 127<sup>th</sup> Street. The temporary staircase was not accessible to disabled persons unable to climb or descend stairs; they were encouraged to use the Third Avenue Bridge as an alternate.

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

The entire bridge was fully closed as needed according to the following schedule for testing operations to complete the NYC DOT bridge reconstruction project:

01/05–06/30: 10:00pm – 6:00am Weeknights;  
12:01am – 7:00am Sat-Sun.

*No closures on this bridge during closures on the Macombs Dam Bridge, or within 2 hours of Yankee home games.*

08/02–12/17: 10:00pm – 6:00am Weeknights;  
12:01am – 7:00am Sat-Sun.

*No closures on this bridge during closures on the Macombs Dam Bridge, or within 2 hours of Yankee home games.*

Throughout 2010, there were additional closures of single lanes in each direction on the 145<sup>th</sup> Street Bridge and its approach ramps during off-peak hours.

### ***Brooklyn-Battery Tunnel***

Throughout 2010, the inbound **exit to Trinity Place** was closed weekdays between 6:00-10:00am, and between 3:00–7:00pm.

Throughout 2010, between 6:00am and 10:00am on weekdays, there were three lanes inbound and one lane outbound.

Throughout 2010, on weekdays between 4:00pm and 7:00pm, there were two lanes outbound to Brooklyn in the south tube, plus one outbound contra-flow lane in the north tube.

Throughout 2010, one tube was closed intermittently as needed during the following hours:

Sun-Thu 10:00pm - 5:30am the following morning,  
Mon-Fri 10:00am – 2:00pm,  
Sun 5:00am - noon.  
*2-way traffic maintained was in the open tube during these times.*

Throughout 2010, there were additional intermittent closures of single lanes in both directions during off-peak hours.

### ***Henry Hudson Bridge***

Southbound (Manhattan-bound) lane closures were in effect as follows.

01/01-01/08: Round-the-clock All Days. 1 of 4 Manhattan-bound lanes closed.  
11:00pm – 5:00am Mon-Fri 3 of 4 Manhattan-bound lanes closed.

01/09-02/19: Round-the-clock All Days. 1 of 4 Manhattan-bound lanes closed. 2<sup>nd</sup> Southbound lane closed as needed 10:00am – 3:00pm weekdays as needed.

02/20-12/31: 10:00am – 3:00pm Mon-Fri. 1 of 4 Manhattan-bound lanes closed.

Northbound (Bronx-bound) lane closures were in effect as follows.

All 2010: 7:00am – 2:00pm Weekdays 1 Bronx-bound lane closed as needed.

Throughout 2010, there were additional intermittent lane closures in both directions during off-peak hours.

### ***Queens-Midtown Tunnel***

Throughout 2010, there were intermittent closures of single lanes in both directions during off-peak hours.

### ***Robert F. Kennedy Bridge (formerly Triborough Bridge)***

From January 1 to February 19, 2010, the following closures were in effect.

At the Harlem lift span, one lane closed as needed to Manhattan 10:00am to 2:30pm daily, and two lanes closed as needed 10:00pm to 5:00am Monday to Friday. One lane closed as needed to Bronx/Queens 6:00am to 2:30pm daily, and two lanes closed as needed 10:00pm to 5:00am.

At the suspension bridge and viaduct, two of four lanes closed as needed to Queens 9:00pm to midnight Monday to Friday. Three of four lanes to Queens closed as needed 12:01am to 6:00am Tuesday, and 12:01am to 5:00am Friday and Saturday. One of four lanes to Bronx and Manhattan closed as needed 10:00am to 3:00pm weekdays, and two of four lanes closed as needed 9:00pm to midnight Monday to Friday, and three of four lanes 12:01am to 6:00am.

From February 20 to December 31, 2010, the following closures were in effect.

At the Harlem River lift span, one of three lanes closed as needed to Manhattan 10:00am to 2:30pm weekdays, and one of two lanes closed as needed on the Manhattan FDR Drive and 125<sup>th</sup> Street exit ramps during the same hours.

At the Harlem lift span, one of three lanes closed as needed to Queens/Bronx 10:00am to 2:30pm weekdays, and one of two lanes closed as needed on the Manhattan FDR Drive and 124<sup>th</sup> Street entrance ramps during the same hours.

At the Queens suspended span/viaduct, one of four lanes to Bronx/Manhattan closed 10:00am to 3:00pm weekdays and two lanes closed as needed 9:00pm to 5:00am weekdays. Also one of four lanes closed to Queens 6:00am to 3:00pm weekdays and two of four lanes closed to Queens 9:00pm to 5:00am weekdays. One of two lanes on the ramp to Randall's Island closed 7:00am to 4:00pm weekdays.

On the Bronx span, one of four lanes closed to The Bronx 10:00am to 3:00pm weekdays, and two of four lanes to The Bronx closed 10:00pm to 5:00am weekdays. One of four lanes to Manhattan/Queens closed 10:00am to 3:00pm weekdays, and two of four lanes closed 10:00pm to 5:00am weekdays.

## ***George Washington Bridge***

Throughout 2010, there were intermittent closures of single lanes during off-peak hours to facilitate PANYNJ maintenance work.

## ***Holland Tunnel***

As of January 3, 2010, the restriction that prohibited 2-axle and 3-axle single unit trucks from using the eastbound tunnel to New York was lifted. All 4-axle, 5-axle, and 6-axle trucks, as well as 3-axle dual unit trucks, trailers, and towed vehicles remained restricted from using the tunnel in both directions.

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

All 2010:	11:30pm – 5:30am	Mon–Fri.	1 w/b lane closed.
	12:01am – 8:00am	Sat.	1 w/b lane closed.

## ***Lincoln Tunnel***

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

All 2010	11:00pm – 5:00am	Mon–Fri.	<i>Two tubes open, providing two traffic lanes in each direction.</i>
	1:00am – 9:00am	Sat.	
	1:00am – 10:00am	Sun.	

