Analysis and Findings

During the course of the Transit Strike, the Department of Transportation (NYCDOT) implemented a comprehensive data collection and monitoring program. NYCDOT synthesized this data to understand the regional travel patterns by various modes of travel during the course of the strike. These findings are summarized in the following section.

This program focused on providing the following components:

- Traffic Patterns in the Manhattan Central Business District (CBD)
  - Vehicle entries and exits into and out of the CBD
  - Vehicle volumes on key arterials and limited access highways
  - Vehicle occupancy and classification
  - Vehicle Travel Times and Speeds
- Traffic Patterns in the Boroughs
  - Vehicle volumes on limited access roadways
  - Vehicle speeds
- Pedestrian and Bicycle Travel Trends
- Functioning Transit Service
  - Waterborne Transportation
  - Private Bus Lines
  - Commuter Rail/PATH Service
  - Taxicab Usage

Traffic Patterns in the Manhattan Central Business District (CBD)

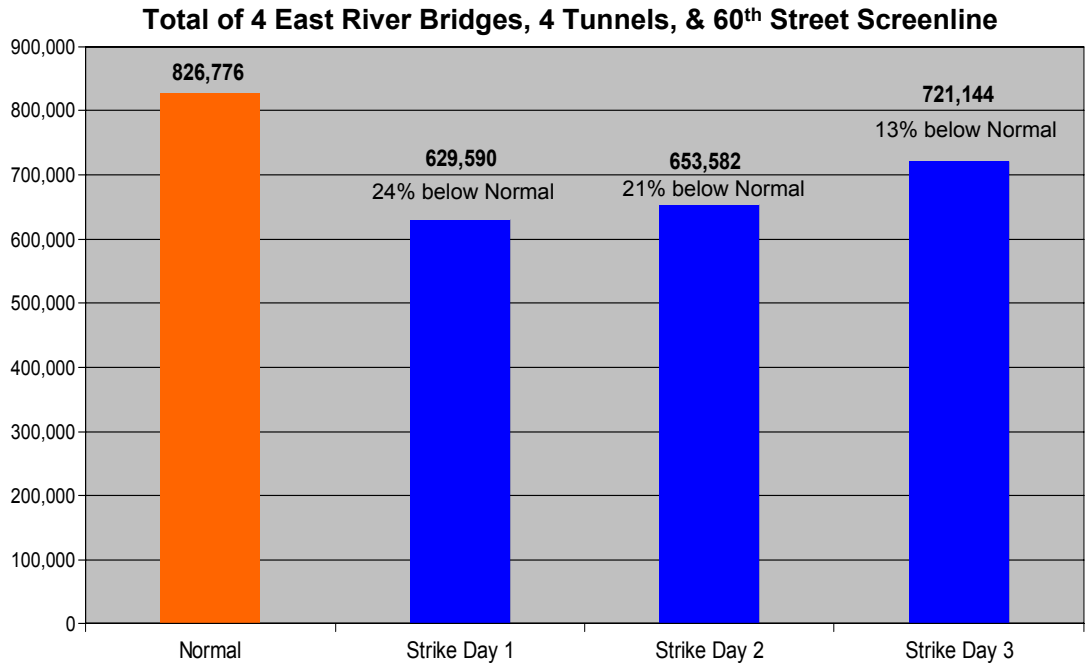
One of the primary goals of the 2005 Strike Contingency Plan was to limit vehicle entries into Manhattan and maximize vehicle occupancy. The Manhattan Central Business District (CBD) represents one of the primary trip generators in the city with the high rate of employment, land use density and number of trips into and out of the area. The Department frequently tracks traffic patterns in the CBD, so there was a good foundation for existing or before numbers.

Vehicle Entries into the Manhattan CBD

The implementation and enforcement of the HOV-4 restriction during the 5-11 AM period had a dramatic effect on controlling vehicle entries into the Manhattan CBD. During the three days of the transit strike, average daily vehicle entries from all sectors into the Manhattan CBD decreased 19%, to 668,103 from 826,776.

CBD vehicle entries were lowest on the first day, and increased steadily as the strike progressed, but never returned to normal levels during the three-day duration of the strike. Daily CBD entries on the first day of the strike totaled 629,590 (24% below normal), increased to 653,582 (21% below normal) on the second day, and increased again to 721,144 (13% below normal) on the third and final day. From Day One to Day Three volume increased significantly by 15%, an additional 91,554 vehicles.

Daily CBD Vehicle Entries
Normal vs. 2005 Transit Strike

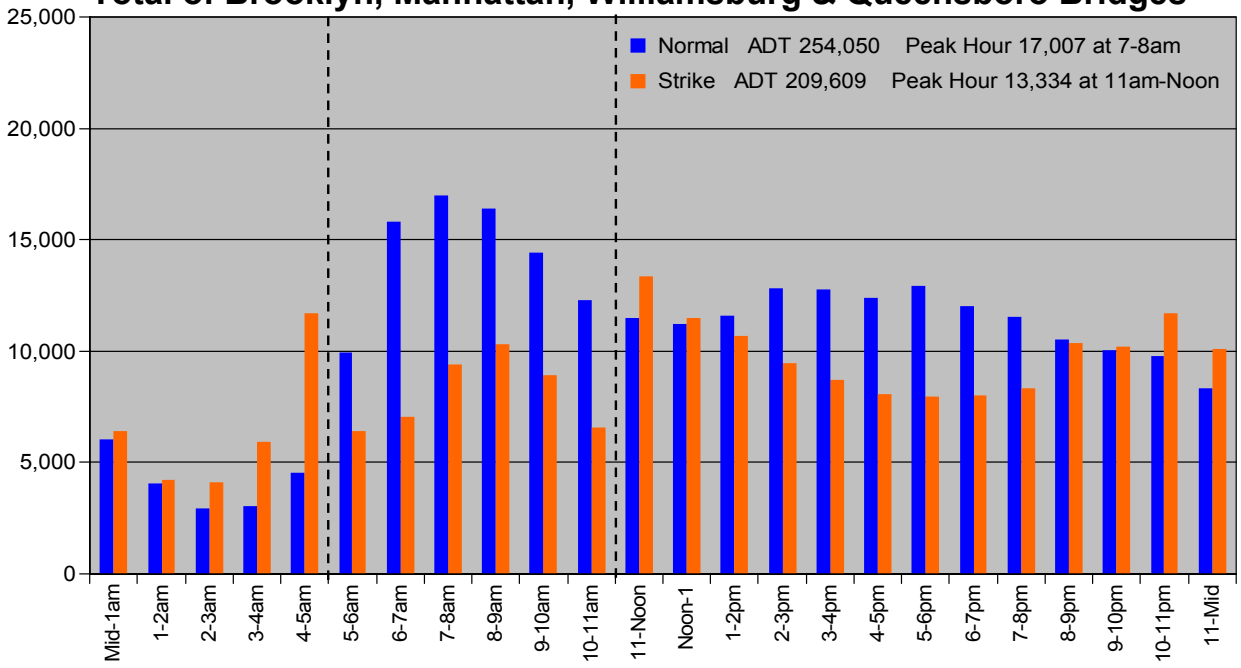


Average daily entries via the six East River crossings declined 15%, to 280,756 from 330,405 (four East River bridges down 18%, to 209,609 from 254,050; Brooklyn-Battery and Queens-Midtown Tunnels down 7%, to 71,147 from 76,355. At the 60th Street screenline, average daily inbound (southbound) volume decreased 20%, to 311,308 from 386,739. Average Hudson River volume from New Jersey via the Lincoln and Holland Tunnels decreased 31%, to 76,039 from 109,632.

Inbound volume began to build early, as many motorists attempted to enter Manhattan before the HOV-4 restriction took effect. Between 2-3am, total CBD entries were already up 27%, to 10,053 from 7,910. Volume continued to rise between 3-4am, with CBD entries up 87%, to 13,748 from 7,358.

Hourly Vehicular Volumes
4 East River Bridges - Inbound

Total of Brooklyn, Manhattan, Williamsburg & Queensboro Bridges



Between 4-5am, just before the HOV-4 restriction went into effect, entries into the CBD more than tripled, to 33,720 from 10,445. Entries via the six East River crossings increased 226%, to 16,345 from 5,012 (four East River bridges up 157%, to 11,719 from 4,562; Brooklyn-Battery and Queens-Midtown Tunnels up ten-fold, to 4,626 from 450). At the 60th Street screenline, inbound (southbound) volume increased 188%, to 11,614 from 4,030. Hudson River volume from New Jersey via the Lincoln and Holland Tunnels quadrupled, to 5,761 from 1,403.

During the six-hour period, 5-11am, with the HOV-4 restriction in effect, the number of vehicles entering the CBD was reduced nearly in half, to 151,211 from 275,292 (-45%). The most dramatic percentage decrease was at the Holland and Lincoln Tunnels, where vehicle entries from New Jersey plunged 76%, to 10,096 from 42,201. Entries via the six East River crossings declined 42%, to 68,502 from 118,340 (four East River bridges down 43%, to 48,704 from 85,878; Brooklyn-Battery and Queens-Midtown Tunnels down 39%, to 19,798 from 32,462). At the 60th Street screenline, inbound (southbound) volume decreased 37%, to 72,613 from 114,751.

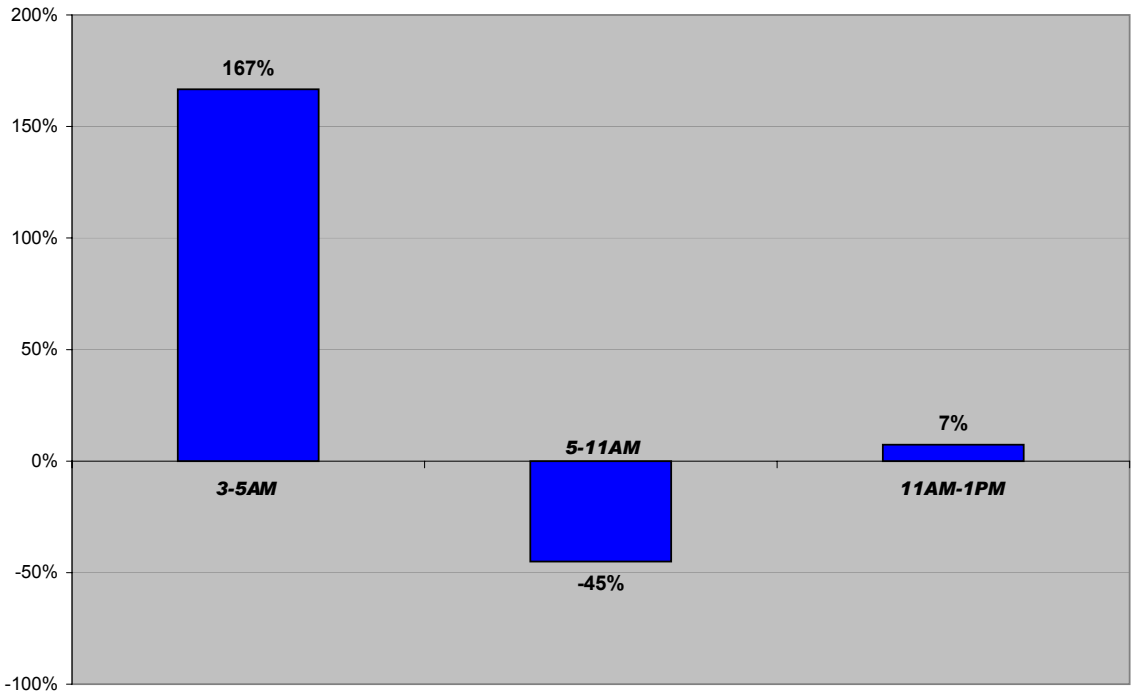
The significant decrease in volume was not due to lack of demand, but to the operation of checkpoints established for enforcement of the HOV regulations, which had the effect of metering the flow of vehicles into Manhattan. As a result, the additional capacity provided by the morning bridge and tunnel lane reversals was less essential than during the 1980 strike. Comparing the four-hour time period, 6-10am, entries during the 2005 strike were dramatically lower than during the 1980 strike. In 2005, entries totaled 110,445, 41% fewer than the 187,000 entries during the same period of the 1980 strike.

Between 11am - noon, immediately after the HOV-4 restriction was lifted, vehicles entering the CBD increased 15% overall, to 46,795 during the strike from 40,642 under normal conditions, making this the peak hour for CBD vehicle entries during the strike. Normally, the maximum hourly inbound flow occurs between 8-9am, but during the strike, 8-9 AM entries decreased 44%, to 31,154 from 55,195.

Between 11am - noon, entries via the six East River crossings increased 25%, to 19,639 from 15,674 (four East River bridges up 16%, to 13,334 from 11,501; Brooklyn-Battery and Queens-Midtown Tunnels up 51%, to 6,305 from 4,173). Hudson River volume from New Jersey via the Lincoln and Holland Tunnels increased 46%, to 8,020 from 5,500. At the 60th Street screenline, inbound (southbound) volume decreased 2%, to 19,136 from 19,468.

During the afternoon and early evening, vehicle entries into the CBD were consistently below normal. Between 1-8pm, CBD entries decreased 24%, to 217,538 from 287,585. These decreases during the afternoon hours were much less pronounced than between 5-11am when the HOV-4 restriction was in place. As a result, the entire inbound 4-hour peak period exhibited a well-defined shift, from 6-10am under normal conditions, to 11am-3pm during the strike. Normally, 206,926 vehicles enter the CBD between 6-10am. During the strike, 6-10am entries decreased 47% to 110,445, which was 28% fewer than the 152,627 entries between 11am-3pm. Between 8pm-2am, inbound volumes were not significantly changed from normal conditions.

Inbound Vehicular Volume to CBD Percent Change vs. Normal Conditions



Vehicle Exits from the Manhattan CBD

Overall, the average daily volume recorded leaving the CBD decreased 14%, to 688,544 from 801,988. However, outbound volumes were up significantly between 3-4am (+34% to 11,321 from 8,423) and between 4-5pm (+80% to 16,992 from 9,423). Since inbound volumes were also up sharply during these two hours prior to the HOV-4 restriction, these additional exiting vehicles may reflect commuters who pass through Manhattan when traveling between their home and work locations.

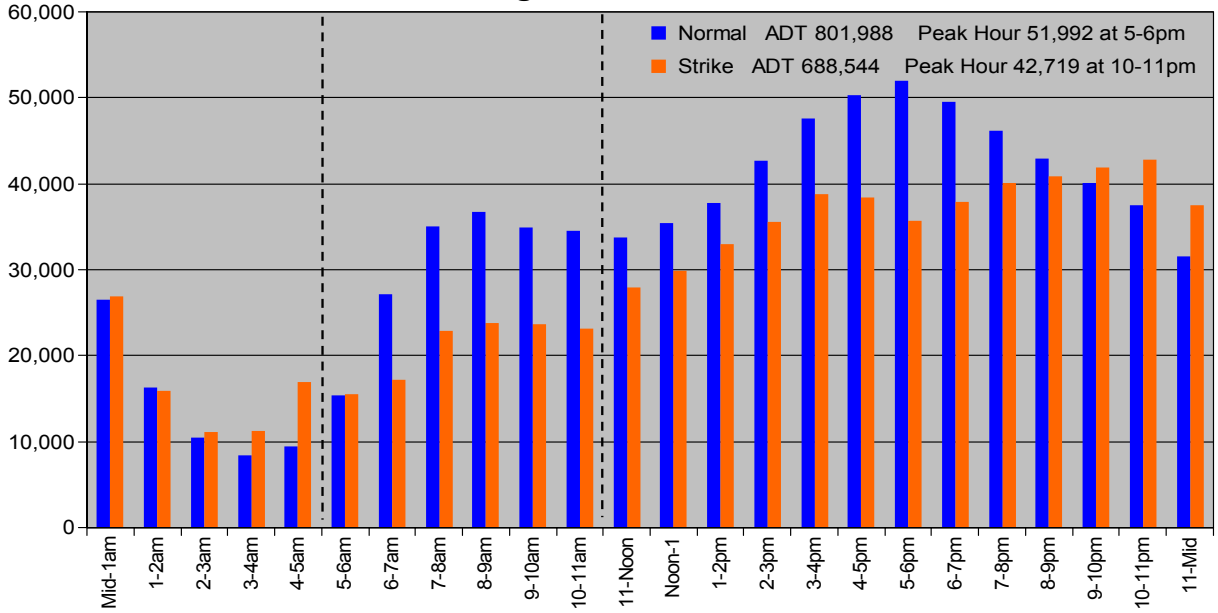
Between 5-11am, outbound volumes decreased 31%, to 126,236 from 183,883, and remained below normal until 9pm. Between 9pm-3am, outbound volumes increased moderately.

Between 10-11pm, outbound volume increased 14%, to 42,719 from 37,463, making this the peak hour for vehicle exits during the strike. Normally, the maximum hourly outbound flow occurs between 5-6pm, but during the strike, 5-6pm exits decreased 31%, to 35,715 from 51,992.

As with the inbound peak period, the entire outbound peak period, normally 3-7pm, also occurred much later during the strike, between 7-11pm. Under normal conditions, 199,275 vehicles exit the CBD between 3-7pm. During the strike, 3-7pm entries decreased 24% to 150,761, which was 9% fewer than the 165,568 exits between 7-11pm.

Hourly Vehicular Volumes
Manhattan CBD - Outbound

Total of 4 East River Bridges, 4 Tunnels, & 60th Street Screenline



Vehicle Accumulation in the CBD

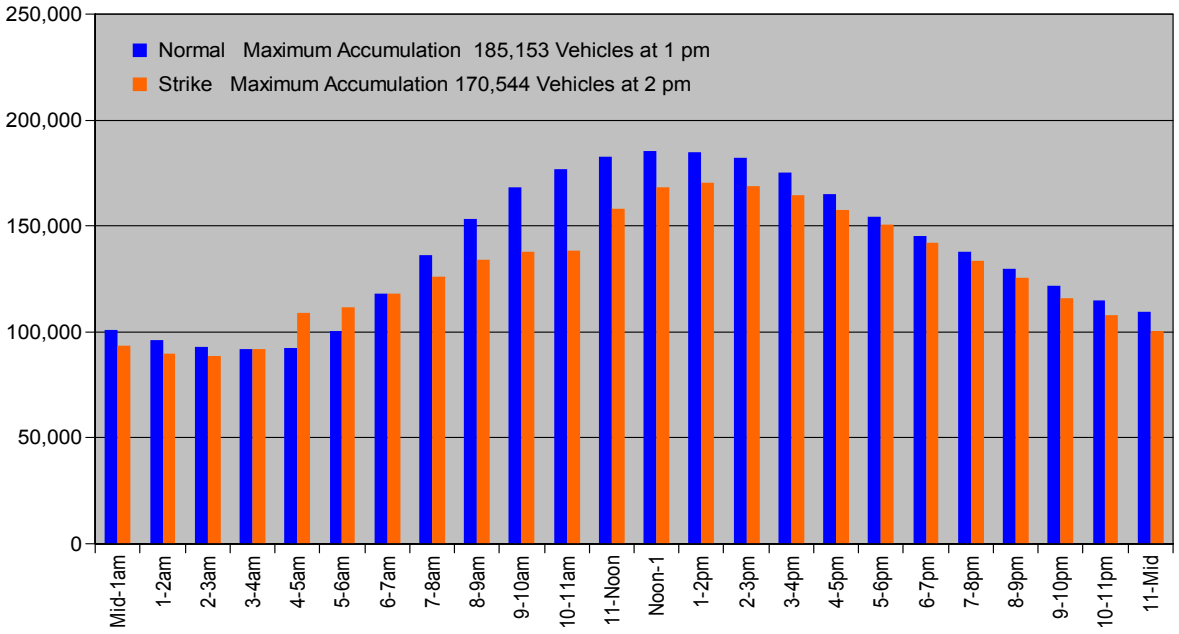
A useful statistic in analyzing the potential for gridlock in the Manhattan CBD is the hourly accumulation of motor vehicles, where accumulation is defined as all vehicles in the zone, whether in use or parked. Under normal conditions, the peak accumulation of motor vehicles in the Manhattan CBD normally occurs at either 1pm or 2pm, with the total accumulation in the range of 185,000 to 195,000 vehicles.

As a result of the HOV-4 restriction, CBD vehicle accumulation during the strike was reduced to 170,500, 8% to 12% below normal. The maximum accumulation was reached at 2pm, in line with normal conditions. After 2pm, accumulation decreased, as there were more vehicle exits than entries. Accumulation was below normal levels during all hours except 4-6am.

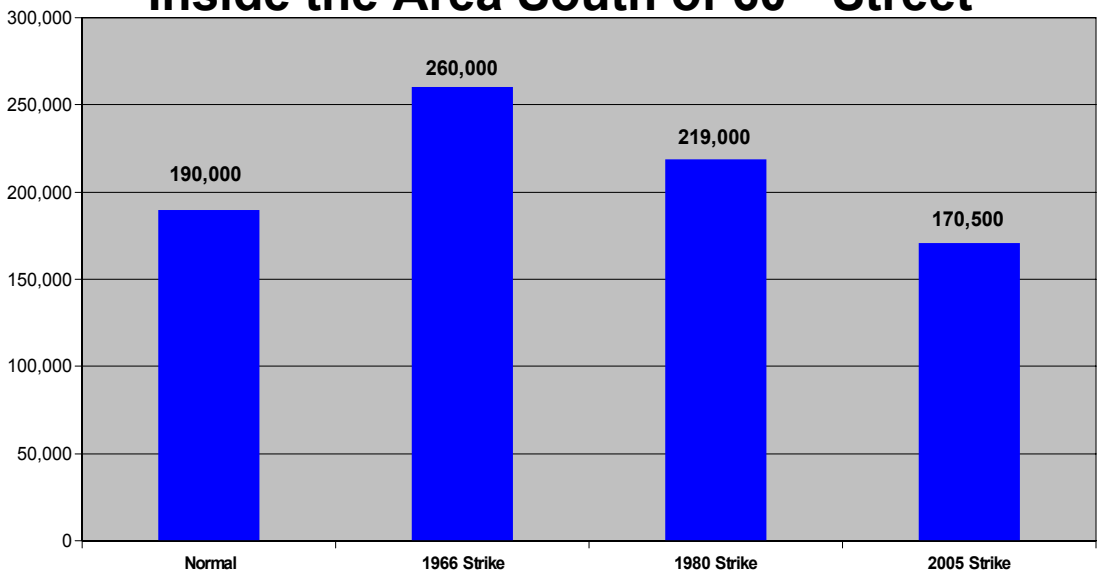
This reduced vehicle accumulation was an improvement compared to the levels recorded during the previous transit strikes in 1966 and 1980. During the 1966 strike, CBD vehicle accumulation reached nearly 260,000, the highest level ever recorded.

During the 1980 strike, accumulation was held to about 219,000, but that was still about 25% greater than the normal level of 175,000 at that time.

Manhattan Hourly CBD Accumulation Vehicles Inside the Area South of 60th Street



Manhattan Hourly CBD Accumulation Normal vs. strikes of 1966, 1980, and 2005 Inside the Area South of 60th Street

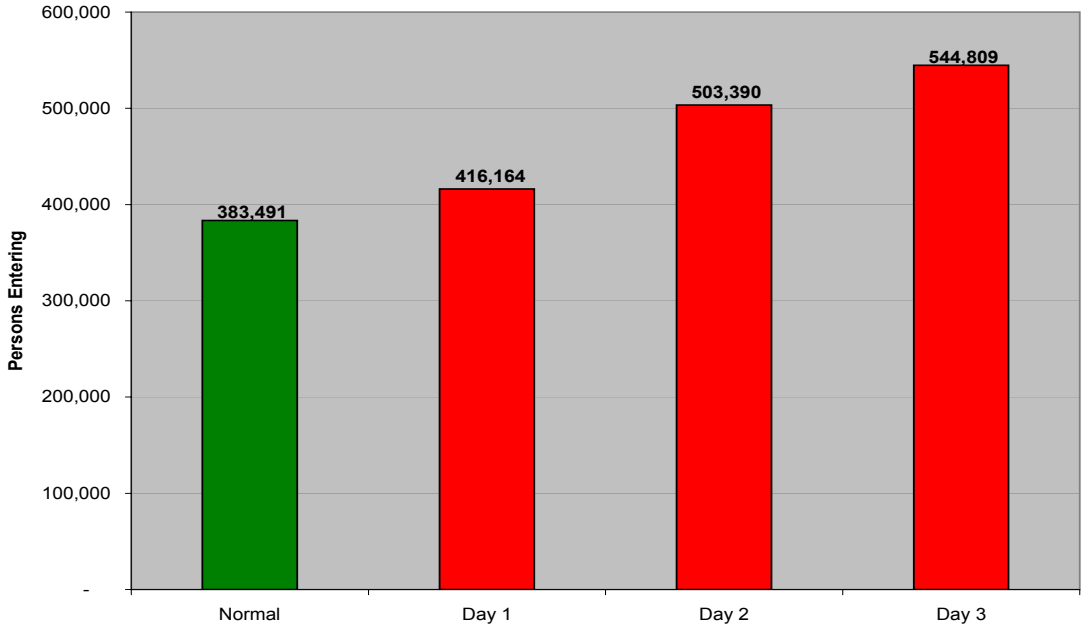


Vehicle Occupancy

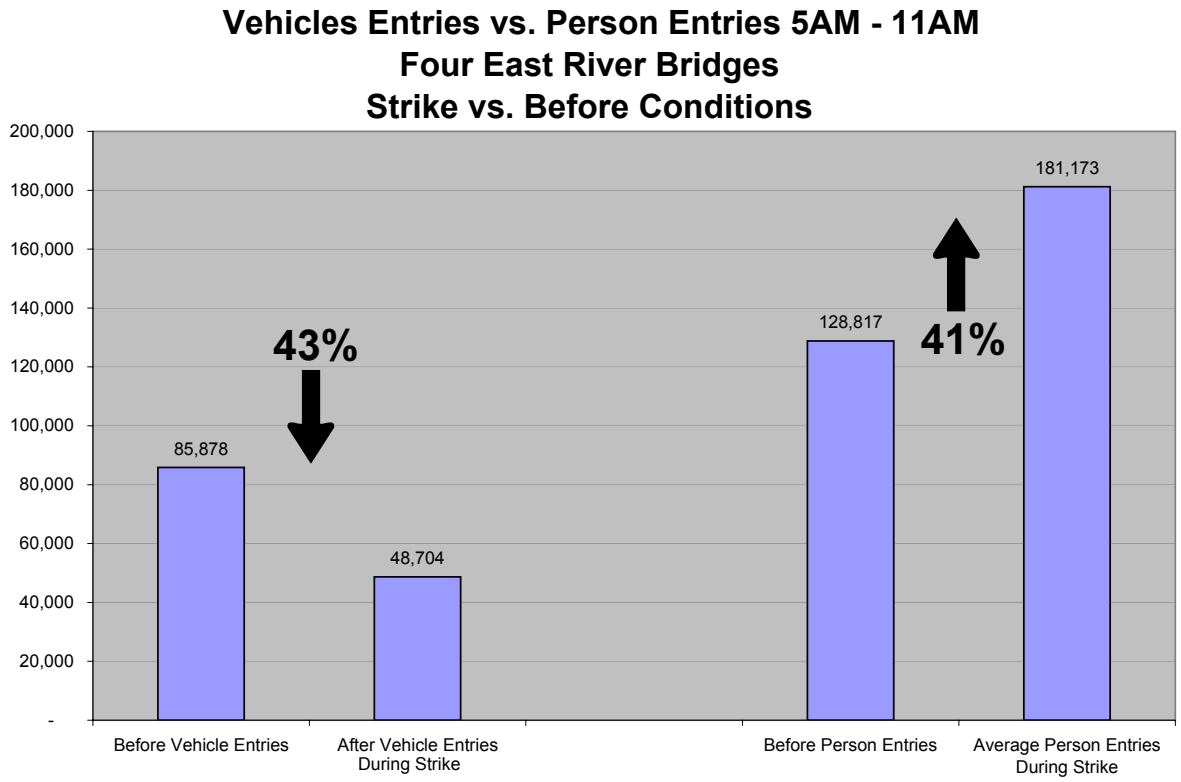
Person Entries

Because of the HOV-4 restriction, more people arrived in the Manhattan CBD in fewer vehicles during the Transit Strike. During the period from 5-11am when the HOV-4 restrictions were in effect, the average number of vehicles entering the CBD declined by 45% to 151,211 from 275,292, while the number of occupants in these vehicles increased by 27% to 488,121 from 383,491. The highest volume occurred on Day Three when 544,809 persons entered, 42% higher than on a normal day, and 31% higher than on Day One.

Persons Entering CBD in Motor Vehicles 5AM - 11AM
Strike vs. Normal Conditions



The largest increase in person entries occurred at the Brooklyn-Battery Tunnel, where the average number of people more than doubled. All other Queens and Brooklyn river crossings showed increases of between 27% and 57%, while there was a 17% increase at the 60th Street screenline. Conversely, the New Jersey crossings showed decreases in person entries. The Holland Tunnel and Lincoln Tunnel had decreases of 53% and 39%, respectively, as large decreases in volume offset the increases in vehicle occupancy. The number of persons entering via the East River Bridges increased by 41% (to 181,173 from 128,817) despite a 43% decline in vehicular entries (to 48,704 from 85,878). Thus, the restrictions were successful in maximizing the person-carrying efficiency of automobile travel into Manhattan.



Vehicle Occupancy Rates

During the three strike days, the average occupancy of motor vehicles (passenger cars, SUVs, and minivans) entering the HOV-4 restricted area of Manhattan south of 96th Street between 5-11am was 3.53 persons per vehicle (ppv), well over twice the usual occupancy of approximately 1.50 ppv. Average occupancy was 2.95 ppv crossing the 96th Street Screenline, 3.73 ppv at the four toll-free East River bridges, 4.18 ppv through the two tolled East River tunnels, and 3.21 ppv through the two tolled Hudson River tunnels.

These occupancy rates are major improvements compared to both the 1966 strike (2.20 ppv) and the 1980 strike (3.19 ppv), which can be attributed to the stricter HOV-4 restriction during the 2005 strike. Occupancy rates were generally somewhat below the overall average between 5-6am, then remained at consistently higher levels between 6-10am, and decreased slightly again between 10-11am.

For vehicles entering the Manhattan CBD (area south of 60th Street) between 5-11am, the average occupancy was 3.24 ppv. These vehicles were subject to the same HOV-4 occupancy requirement at the four tunnels and the four East River bridges; however, there was no occupancy requirement for vehicles crossing the 60th Street screenline, where the average occupancy was 2.39 ppv.

Daily Inbound Vehicle Occupancy Rates Passenger Cars, SUVs, and Minivans 5-11AM

Persons per Vehicle (Includes the Driver)

	Day 1 Dec. 20	Day 2 Dec. 21	Day 3 Dec. 22	Strike Avg.
Brooklyn Bridge	3.01	3.02	2.95	**2.99**
Manhattan Bridge	3.39	4.03	4.08	**3.85**
Williamsburg Bridge	3.53	3.89	3.74	**3.73**
Queensboro Bridge	3.58	4.01	4.02	**3.90**
East River Bridges Totals	**3.45**	**3.85**	**3.82**	**3.73**
Brooklyn-Battery Tunnel	3.49	4.39	4.12	**4.08**
Queens-Midtown Tunnel	4.21	4.41	4.43	**4.34**
MTABT East River Totals	**3.84**	**4.40**	**4.22**	**4.18**
Holland Tunnel	2.18	3.06	2.99	**2.83**
Lincoln Tunel	2.88	4.00	4.07	**3.73**
PANYNJ Hudson River Totals	**2.50**	**3.41**	**3.48**	**3.21**
96th Street Screenline	**2.81**	**3.01**	**2.99**	**2.95**
Restricted Area South of 96th St.	**3.26**	**3.66**	**3.60**	**3.53**

Overall occupancy was somewhat higher on Days 2 and 3 than on Day 1. Between 5-11am, for vehicles entering the restricted area south of 96th Street, occupancy was 3.26 ppv on the first day, 3.66 ppv on the second day, 3.60 ppv on the third day. For vehicles entering the CBD area south of 60th Street, occupancy was 2.96 ppv on the first day, 3.38 ppv on the second day, and 3.32 ppv on the third day.

Fully 68% of all vehicles entering the restricted area were in compliance with the occupancy requirement, with compliance rates at the individual entry points, ranging from a low of 36% through the Holland Tunnel to a high of 86% on the Queensboro Bridge.

On borough Priority Roadways leading to Manhattan, occupancy rates were considerably lower than for vehicles actually entering the restricted zone. For example, between 5-11am, average inbound occupancy was only 1.28 ppv on the Bruckner Expressway, 1.47 ppv on the Gowanus Expressway, and 1.83 on the Long Island Expressway.

Vehicle Classification

The prohibition against commercial vehicles entering the area of Manhattan south of 96th Street between 5-11am was highly successful. During the full six hours that the restrictions were in effect, only 3.5% of all traffic entering via the four East River bridges comprised trucks and commercial vans. At the Brooklyn-Battery and Queens-Midtown Tunnels, 1.1% of the total traffic was trucks and commercial vans. At the Holland and Lincoln Tunnels, 3.1% of the total traffic into Manhattan was trucks and commercial vans. Of the total traffic entering the restricted zone across the 96th Street screenline, the percentage of trucks and commercial vans was 5.0%

During the 7-10am period, the percentage of trucks and commercial vans entering the restricted zone via the four East River bridges was reduced from 19.4% under normal conditions to just 1.8% during the strike. The number of trucks and commercial vans entering via these four bridges decreased by 94%, to 515 from 9,275.

The largest component of traffic entering the restricted zone between 5-11am was private automobiles: 72.5% on the East River bridges, 68.0% through the two East River Tunnels, 50.2% through the two Hudson River tunnels, and 54.1% crossing the 96th Street screenline.

Taxis, limousines, and black cars were the second most common vehicles entering the restricted zone between 5-11am: 19.3% on the East River bridges, 17.6% through the two East River Tunnels, 26.5% through the two Hudson River tunnels, and 28.1% crossing the 96th Street screenline.

Buses were a relatively smaller component of the traffic entering the restricted zone between 5-11am: 2.1% on the East River bridges, 7.4% through the two East River Tunnels, 8.0% through the Holland Tunnel, 28.9% through the Lincoln Tunnel, and 3.4% crossing the 96th Street screenline.

The all-day (5am-8pm) vehicular restrictions on the Reserved Streets in Manhattan were also successful. Only emergency vehicles, buses, full commuter vans, para transit vehicles, and motorcycles were permitted on the Reserved Streets. The two north-south Reserved Streets were Madison and Fifth Avenues. With the restrictions in place from 5am until 8pm, trucks and commercial vans made up just 8.4% of traffic on Madison Avenue, and 3.7% on Fifth Avenue. On Madison Avenue, the highest percentages of commercial vehicles occurred between 5-7am (16.2%), between 11am-2pm (10.2%), and between 3-7pm (9.5%). On Fifth Avenue, the highest percentage of commercial vehicles occurred between noon-2pm (8.0%).

MANHATTAN TRAVEL TIMES AND SPEEDS

As part of its monitoring efforts, the Department collected Travel Time and Speed data between 5am and 8pm on six non-restricted Manhattan thoroughfares (three northbound and three southbound) during the three days of the transit strike. In addition, data was also collected on the two north-south Reserved Streets between 23rd and 79th Streets. Madison Avenue (northbound) was a Reserved Street throughout the strike. Fifth Avenue (southbound) was a Reserved Street on Day One and Day Two, but that designation was removed on Day Three, when just one lane was reserved for emergency vehicles.

Avenues

Northbound and southbound speeds were generally better during the morning hours, 5-11am, when the HOV-4 restriction was in effect, and deteriorated as the day progressed.

Travel Time and Speeds were considerably higher on the two Reserved Streets during all time periods, as compared to the non-Reserved Streets. The removal of the Reserved Street designation from Fifth Avenue on Day Three did not have a significant impact on travel time and speed, as volume on Fifth Avenue was still 54% below normal throughout the study period. Speeds on Fifth Avenue averaged 8.8 mph on the first day of the strike, and 9.1 mph on both the second and third days.

Southbound Avenues

The non-restricted southbound routes studied were Second and Park Avenues from 79th Street to 23rd Street, and Broadway/Seventh Avenue from 59th Street (Central Park South) to 23rd Street.

Between 5am-8pm, southbound average travel time on the three non-restricted roadways was 27.6 minutes, yielding an average speed of 5.4 mph (5.9 mph on Park Avenue, 4.5 mph on Broadway/7th Ave., and 5.5 mph on Second Avenue). On Fifth Avenue (the southbound Reserved Street), travel time was 18.1 minutes, and speed was 9.3 mph, 72% faster than the average of the non-restricted roadways.

From 5-11am, while the HOV-4 restriction was in effect, southbound average travel time on the three non-restricted roadways was 22.4 minutes, yielding an average speed of 6.6 mph (5.7 mph on Park Avenue, 5.4 mph on Broadway/7th Ave., and 9.6 mph on Second Avenue). On Fifth Avenue, travel time was 14.1 minutes, and speed was 11.9 mph, 80% faster than the average of the non-restricted roadways.

During the midday period, between 11am and 2pm, southbound average travel time on the three non-restricted roadways was 28.3 minutes, yielding an average speed

of 5.2 mph (7.0 mph on Park Avenue, 4.6 mph on Broadway/7th Ave., and 5.2 mph on Second Avenue). On Fifth Avenue, travel time was 20.1 minutes, and speed was 8.4 mph, 62% faster than the average of the non-restricted roadways.

From 2-8pm, average southbound travel time on the three non-restricted roadways was 32.5 minutes, yielding an average speed of 4.6 mph (5.7 mph on Park Avenue, 3.9 mph on Broadway/7th Ave., and 3.5 mph on Second Avenue). On Fifth Avenue, travel time was 21.2 minutes, and speed was 7.9 mph, 72% faster than the average of the non-restricted roadways.

Northbound Avenues

The non-restricted northbound routes studied were Third and Park Avenues from 23rd Street to 79th Street, and 6th Avenue from 23rd Street to 59th Street (Central Park South).

Between 5am-8pm, northbound average travel time on the three non-restricted roadways was 23.4 minutes, yielding an average speed of 6.3 mph (7.7 mph on Park Avenue, 5.2 mph on 6th Avenue, and 6.0 mph on Third Avenue). On Madison Avenue (the northbound Reserved Street), travel time was 18.0 minutes, and speed was 9.3 mph, 48% faster than the average of the non-restricted roadways.

From 5am to 11am, while the HOV-4 restriction was in effect, northbound average travel time on the three non-restricted roadways was 16.0 minutes, yielding an average speed of 9.3 mph (9.7 mph on Park Avenue, 6.7 mph on 6th Avenue, and 11.5 mph on Third Avenue). On Madison Avenue, average travel time was 14.4 minutes, and speed was 11.7 mph, 26% faster than the average of the non-restricted roadways.

During the midday period, between 11am and 2pm, northbound average travel time on the three non-restricted roadways was 25.6 minutes, yielding an average speed of 5.8 mph (8.9 mph on Park Avenue, 4.9 mph on 6th Avenue, and 6.1 mph on Third Avenue). On Madison Avenue, average travel time was 18.5 minutes, and speed was 9.1 mph, 57% faster than the average of the non-restricted roadways.

From 2pm to 8pm, northbound average travel time on the three non-restricted roadways was 29.7 minutes, yielding an average speed of 5.0 mph (6.0 mph on Park Avenue, 4.3 mph on 6th Avenue, and 3.1 mph on Third Avenue). On Madison Avenue, average travel time was 21.4 minutes, and speed was 7.8 mph, 59% faster than the average of the non-restricted roadways.

Crosstown Streets

Travel Time and Speed data were collected on two pairs of Manhattan crosstown streets between First and Eighth Avenues The first pair was 49th and 50th Streets, which were designated Reserved Streets during the strike. The second pair was 53rd and 54th

Streets, which were not subject to any restrictions.

Travel times and speeds on the crosstown Reserved Streets were only slightly better than on the non-restricted crosstown streets. The best overall speeds were on 50th Street, a Reserved Street (4.8 mph), the worst on 53rd Street, a non-restricted street (3.8 mph).

On the two Reserved Streets (49th and 50th Streets), between 5am and 8pm, combined average travel time was 15.4 minutes, yielding an average speed of 4.6 mph. For the most part, travel times speeds were not significantly changed from pre-strike conditions. The only exception was on 50th Street between 7-10am, where travel time decreased 18%, to 12.3 minutes from 15.1 minutes, and speed increased 23%, to 5.8 mph from 4.7 mph.

On the two non-restricted streets (53rd and 54th Streets), between 5am-8pm, combined average travel time was 17.0 minutes, 10% longer than on the Reserved Streets. Average speed on the non-restricted streets was 4.2 mph, 9% slower than on the Reserved Streets.

Traffic Patterns in the Boroughs

Given the regional characteristics of commuting in New York City, the Department also monitored traffic volumes and speeds on select arterials in the boroughs leading into Manhattan.

Vehicle Volumes on Limited Access Highways

Similar to traffic patterns entering the Manhattan CBD, inbound volumes on the limited access highways in the boroughs increased significantly during the early morning hours before the HOV-4 restriction went into effect at 5am, then decreased when the restriction was in effect between 5-11am, and rebounded after the restriction was lifted. On most facilities, the early morning inbound volume increases were apparent as early as the 2 -3am period. After the HOV-4 restriction was lifted, volumes increased on most of the facilities, although not as dramatically as the increase in CBD entries.

Long Island Expressway (including Service Road) at the City Line

On the Long Island Expressway at the Queens-Nassau border, average daily traffic entering Queens decreased 8%, to 115,804 vehicles during the strike from 125,479 before the strike. During the hours immediately preceding the HOV-4 restriction, 2-3am volume increased 23%, to 994 vehicles from 808 vehicles, 3-4am volume increased 62%, to 1,785 from 1,104, and 4-5am volume increased 39%, to 2,979 from 2,148. Between 5-11am, with the HOV-4 restriction in effect, inbound volume decreased 20%, to 32,945 from 41,223. Between 1-8pm, inbound volume was 5% below normal (47,310 during the strike compared to 49,820 before the strike).

Grand Central Parkway (including Service Road) at the City Line

On the Grand Central Parkway at the Queens-Nassau border, average daily traffic entering Queens from Nassau was up less than 1%, to 81,711 vehicles during the strike from 81,459 before the strike. During the hours immediately preceding the HOV-4 restriction, 2-3am inbound volume tripled, to 718 vehicles from 234 vehicles, 3-4am volume increased 54%, to 461 from 299, and 4-5am volume increased 41%, to 1,236 from 874. Between 5-11am, with the HOV- 4 restriction in effect, inbound volume decreased 14%, to 24,007 from 28,034. Between 1-8pm, inbound volume increased 4%, to 34,721 from 33,451. Volumes remained heavier than normal through the night, with 8pm-midnight volume increasing 16%, to 11,520 from 9,915.

New England Thruway at the City Line

Due to irregularities in the operation of the ATR equipment on the New England Thruway at the Bronx-Westchester border, only limited inbound data was obtained at this

location.

During the hours immediately preceding the HOV-4 restriction, 3-4am volume entering the Bronx from Westchester increased 56%, to 1,400 from 896, and 4-5am volume increased 40%, to 2,050 from 1,460. Between 5-11am, with the HOV-4 restriction in effect, inbound volume decreased 3%, to 18,442 from 18,928.

Bronx River Parkway at the City Line

On the Bronx River Parkway at the Bronx-Westchester border, average daily traffic entering the Bronx from Westchester increased 3%, to 48,510 vehicles during the strike from 47,072 before the strike. During the hours immediately preceding the HOV-4 restriction, 2-3am volume entering the Bronx increased 95%, to 317 vehicles from 163 vehicles, 3-4am volume increased 69%, to 310 from 184, and 4-5am volume increased 50%, to 603 from 403. Between 5-11am, with the HOV-4 restriction in effect, inbound volume decreased 7%, to 16,014 from 17,277. Between 1-8pm, inbound volume increased 2%, to 19,287 during the strike from 8,827 before the strike. Between 8pm-midnight, inbound volume increased 21%, to 6,722 from 5,580.

Gowanus Expressway between 54th-55th Streets, Brooklyn

On the Gowanus Expressway between 54th and 55th Streets in Brooklyn, average daily northbound traffic (toward Manhattan) decreased 8%, to 81,586 vehicles during the strike from 88,865 before the strike. During the hours immediately preceding the HOV-4 restriction, 2-3am inbound volume increased 43%, to 1,420 vehicles from 996 vehicles, 3-4am volume increased 71%, to 2,124 from 1,242, and 4-5am volume increased 46%, to 3,818 from 2,619. Between 5-11am, with the HOV-4 restriction in effect, inbound volume decreased 21%, to 22,904 from 28,793. Between 1-8pm, inbound volume decreased 11%, to 27,889 during the strike from 31,412 before the strike. The bulk of this decrease occurred between 4-7pm, when volume was down 17%, to 11,486 from 13,902.

Grand Central Parkway at 90th Street (Queens)

On the Grand Central Parkway at 90th Street in Queens, average daily westbound traffic (toward Manhattan) increased 4%, to 125,703 vehicles during the strike from 120,547 before the strike. During the hours immediately preceding the HOV-4 restriction, 2-3am inbound volume increased 46%, to 858 vehicles from 589 vehicles, 3-4am volume more than doubled, to 1,594 from 752, and 4-5am volume increased 130%, to 4,113 from 1,785. Between 5-11am, with the HOV-4 restriction in effect, inbound volume decreased 8%, to 37,069 from 40,310. Between 1-8pm, inbound volume increased 2%, to 46,708 during the strike from 45,839 before the strike. Inbound volumes increased significantly

between 8pm-midnight (+17%, to 19,324 from 16,460).

Bruckner Expressway at East 149th Street, Bronx

Due to irregularities in the operation of the ATR equipment on the Bruckner Expressway at East 149th Street in the Bronx, only limited inbound data was obtained at this location. During the hours immediately preceding the HOV-4 restriction, 3-4am volume increased 138%, to 1,254 from 528, and 4-5am volume tripled, to 2,885 from 970. Between 5-11am, with the HOV-4 restriction in effect, inbound volume decreased 20%, to 20,833 from 26,106.

Travel Speeds on Other Borough Roadways

The City imposed HOV-4 restrictions between 5-11am on several limited access roadways including the Gowanus Expressway, the Long Island Expressway (LIE), Bruckner Expressway and the Henry Hudson Parkway (HHP) on travel in the inbound direction between 5am and 11am. There were no restriction on major arterials such as Flatbush Avenue and Northern Boulevard although curbside rush hour regulations were expanded. In addition, there was no before data collection for the Bruckner Expressway/ FDR Drive, the HHP, and the BQE/GCP.

During the three day strike, average speed on the Gowanus Expressway between 86th Street and the Brooklyn-Battery Tunnel averaged 20.2 mph during the 5am-11am period, an increase of 45% over the “before” average speed of 13.9 mph.

The LIE between the Cross Island Parkway and the Queens Midtown Tunnel experienced a decrease in average speed of 39% to 16.4 mph from 27.0 mph during the 5am-11am period.

Speeds on the Brooklyn-Queens Expressway (BQE)/Grand Central Parkway (GCP) between Northern Boulevard and the Williamsburg Bridge averaged 11.5 mph, lower than the speeds on the LIE during the 5-11am period.

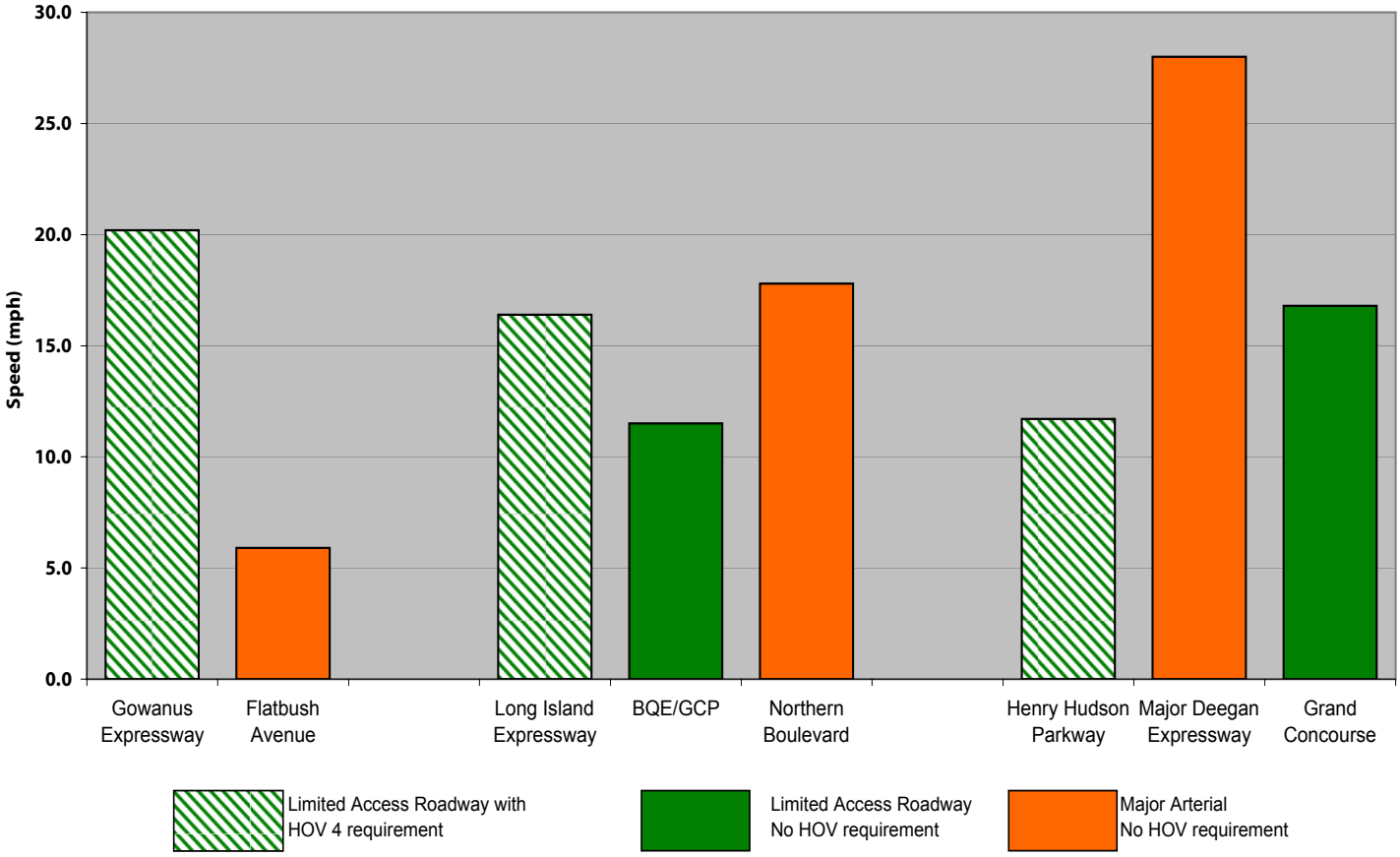
The Bruckner Expressway/FDR Drive between the Bruckner interchange and 63rd Street operated well with speeds averaging 37.0 mph.

The average speed on the HHP between the City line and West 72nd Street was only 11.7 mph between 5am and 11am as it was more directly impacted by the strike. The impacts were more severe on the HHP as it acts as a “collector” road for Westchester County and points north as well as New Jersey traffic. Additionally at its terminus, the HHP abuts the Manhattan street system at West 59th Street and Route 9A/West Side Highway. Congestion in this area/corridor may have contributed to bottlenecks and reduced speed on the HHP.

The Major Deegan Expressway between the City line and the Madison Avenue Bridge, which had no travel restrictions, operated efficiently with speeds averaging 28.0 mph during the 5am-11am period.

The only arterial roadway for which the Department collected "before" travel times was Flatbush Avenue. For the three day transit strike speeds on Flatbush Avenue from Kings Highway to the Manhattan Bridge averaged 5.9 mph, 43% below the average "before" speed of 10.4 mph. This may be attributable to: congestion approaching the Manhattan Bridge at the northern end of Flatbush Avenue at its approach to the Manhattan Bridge; the increased usage of Flatbush Avenue as a primary north-south Brooklyn route for non-HOV-4 users; and a general increase in traffic congestion on roadways in the boroughs. Northern Boulevard and the Grand Concourse operated comparatively well during the strike with average inbound speeds of 16.8 mph and 14.9 mph during the 5am to 11am period.

Average Vehicular Speeds by Roadway 5AM-11AM - Inbound to Manhattan

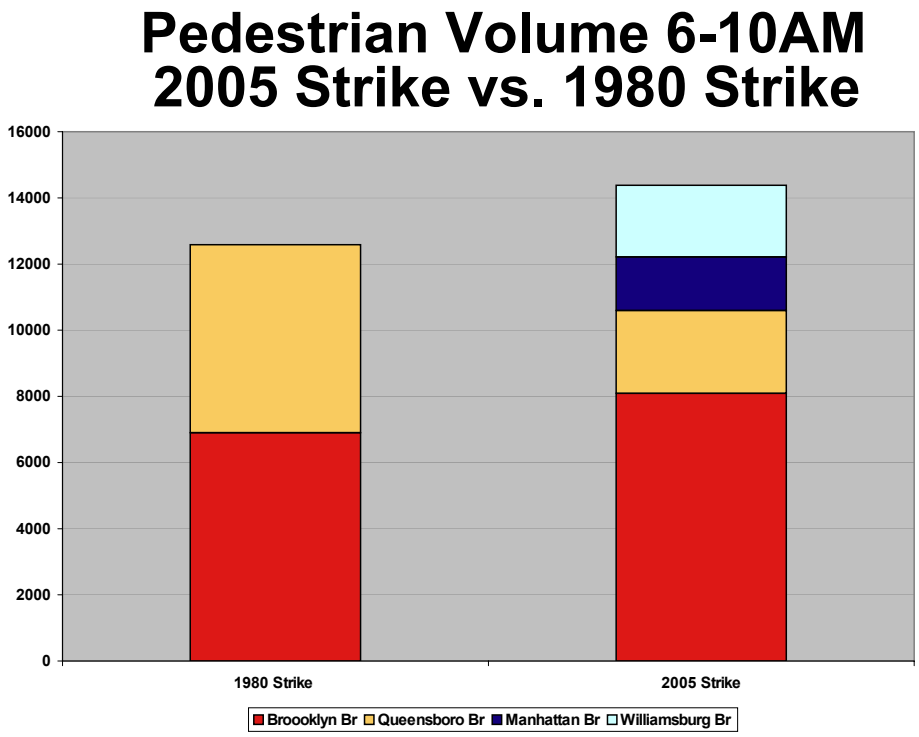


Pedestrian and Bicycle Trends

During the 2005 strike, a significant number of New Yorkers walked to their destinations as pedestrian volumes, despite the inclement weather, were higher than during the 1980 strike. The East River bridges were highly utilized as inbound pedestrian volumes during the 6-10am peak period averaged 14,383, 14% higher than during the 1980 strike and approximately six times as high as during a normal winter day. Daily pedestrian volumes between 5am and 8pm exceeded 34,000. Conversely, the volume of cyclists was lower than during the 1980 strike. The bicycle volume was still significantly above average daily volumes as compared to summer 2005. In the quarter-century since the previous transit strike, the City has recognized the importance of walking and cycling and has undertaken many initiatives to improve opportunities for cycling and has enhanced the pedestrian environment. To date, the Department has implemented approximately 400 miles of bicycle facilities throughout the City, significantly enhanced the condition of bicycle paths on bridges, and has installed approximately 3,400 bicycle racks. Additionally, the Department has provided separate rights-of-way for pedestrians and bicyclists on the Williamsburg and Manhattan Bridges. These improvements helped spread the demand during the 2005 strike.

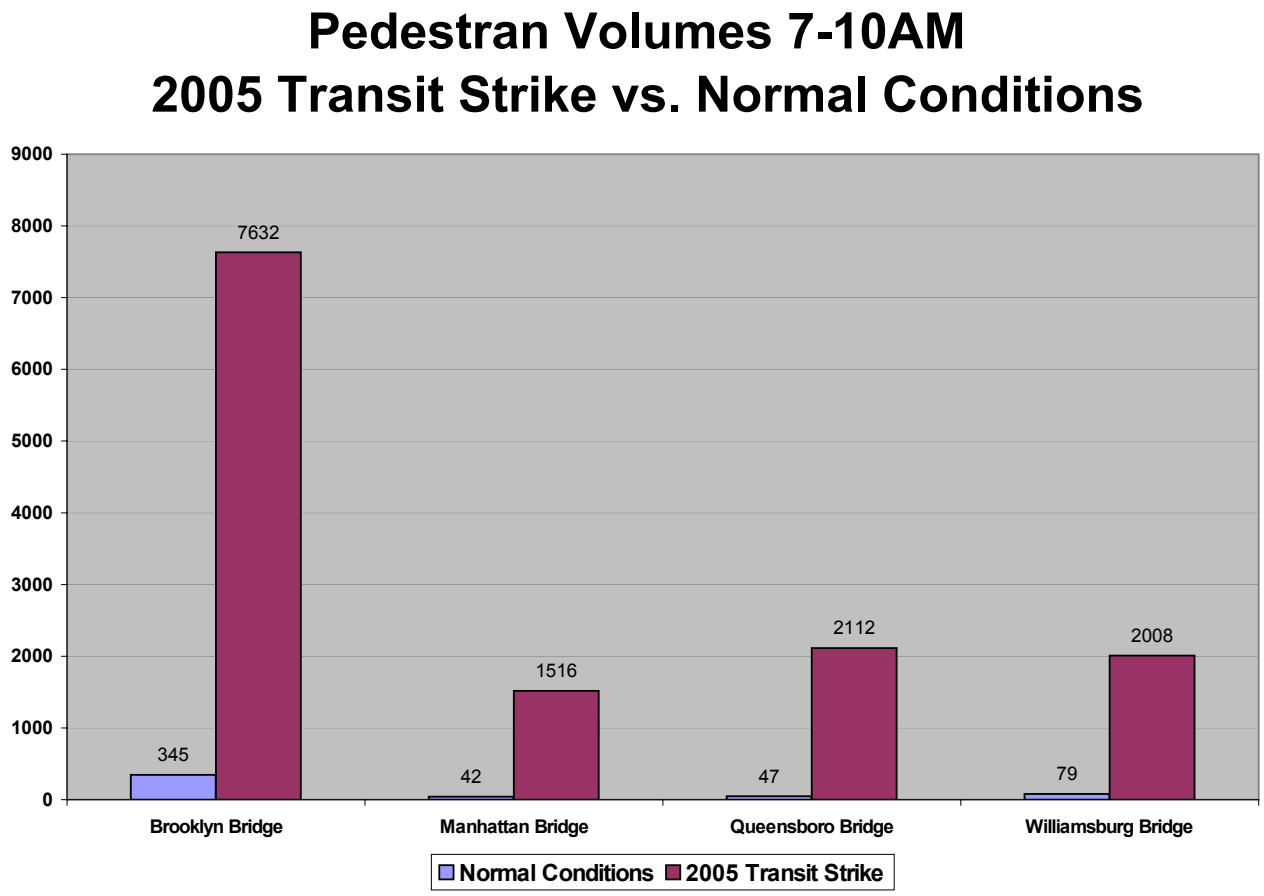
Pedestrian Travel

Walking was the primary mode of non-motorized transportation during the 2005 transit strike, as pedestrian volumes exceeded 1980 strike levels. Between 6-10am, pedestrian entries were 14% higher than those recorded in 1980. In contrast, bicycle volume decreased significantly (44%) from 1980 strike levels despite the availability of additional bicycle facilities and the expansion of the bicycle network.



On an average strike day, 34,381 pedestrians traveled inbound across the four East River Bridges between 5am and 8pm, with the highest total volume recorded between 8am and 9am, with an average of 4,763 pedestrians. On average, 13,268 pedestrians traversed the four East River Bridges, inbound,

between 7am and 10am during the strike, over twenty-six times the pedestrian volume of 509 for a normal winter day.



Of the four bridges, the Brooklyn Bridge accounted for the highest percentage of inbound pedestrian trips, with an average volume of 17,959, or 52% of total inbound pedestrian volumes between 5am and 8pm. In addition, the 7-8am period on the Brooklyn Bridge accounted for the highest inbound hour total for all bridges with an average volume of 2,861 pedestrians.

In comparison to averages for the 1980 strike for the 6-10am period, the average number of inbound pedestrians for the three days of the 2005 strike increased by 14% (to 14,383 from 12,583). The number of pedestrians during this period increased by 56% on the Brooklyn Bridge and decreased 62% on the Queensboro Bridge as compared to the 1980 strike.

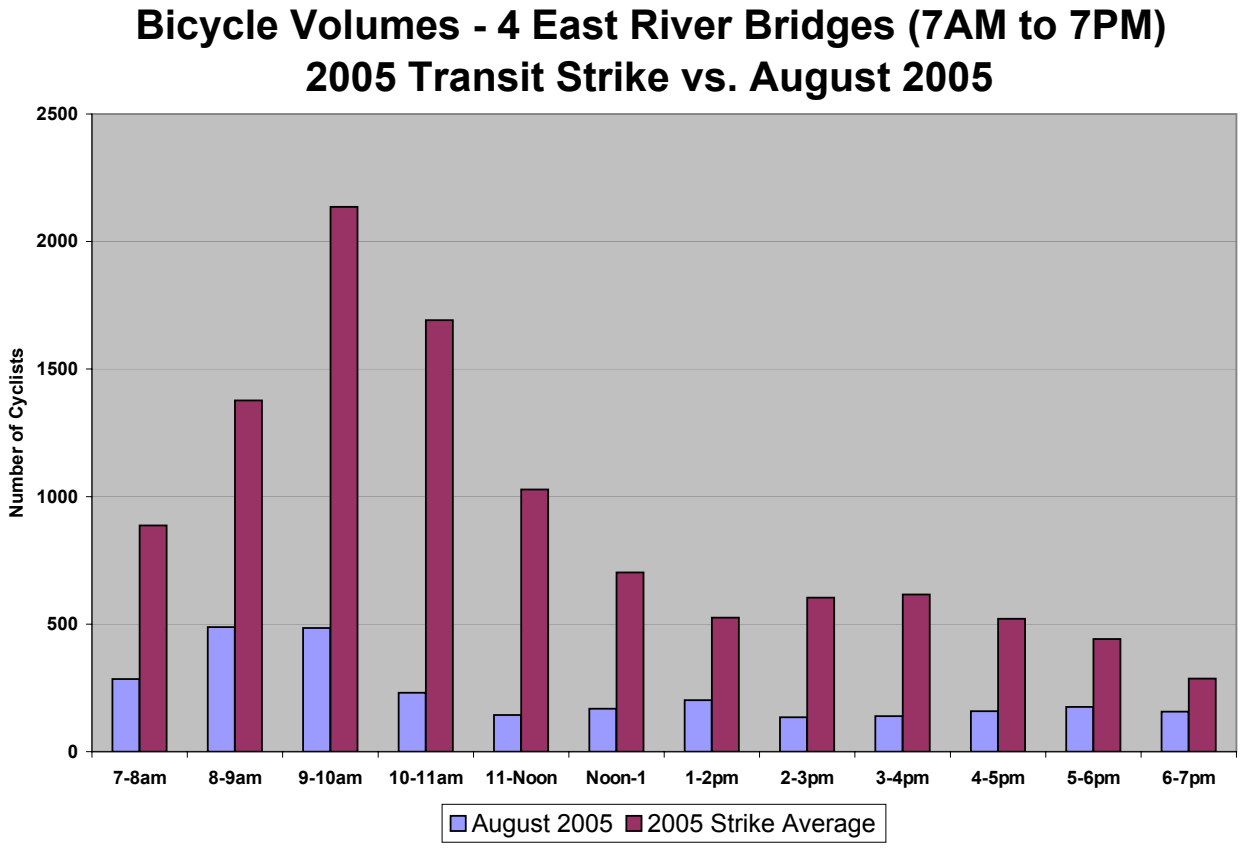
The hour from 6am to 7am exhibited a decrease of 43% in the total volume of inbound pedestrians while the hours from 7am to 8am and from 8am to 9am experienced increases of 2% and 3%, respectively, compared to the 1980 strike volume. Notably, the pedestrian volume for the hour from 9am to 10am in 2005 was more than two times the

1980 strike volume. This may be attributed to the climate change and the later sunrise.

Bicycle Travel

Bicycle travel on the four East River bridges surpassed the average daily volumes for August 2005 but was significantly below 1980 strike levels.

For the three-day strike, the average number of bicycles entering Manhattan between 5am and 8pm on the four East River Bridges was 11,717 with Day Three having the highest total, 12,520. The average number of bicyclists traveling between 7am and 7pm was 10,817 nearly four times that of the volume of cyclists in August 2005. The 7-10am volume during the 2005 strike is more than three times the volume during August 2005. The heaviest volume occurred between 9am and 10am when over 2,000 bicyclists entered the City via the East River Bridges. Finally, the change in seasons may have affected the temporal distribution of bicycle travel.

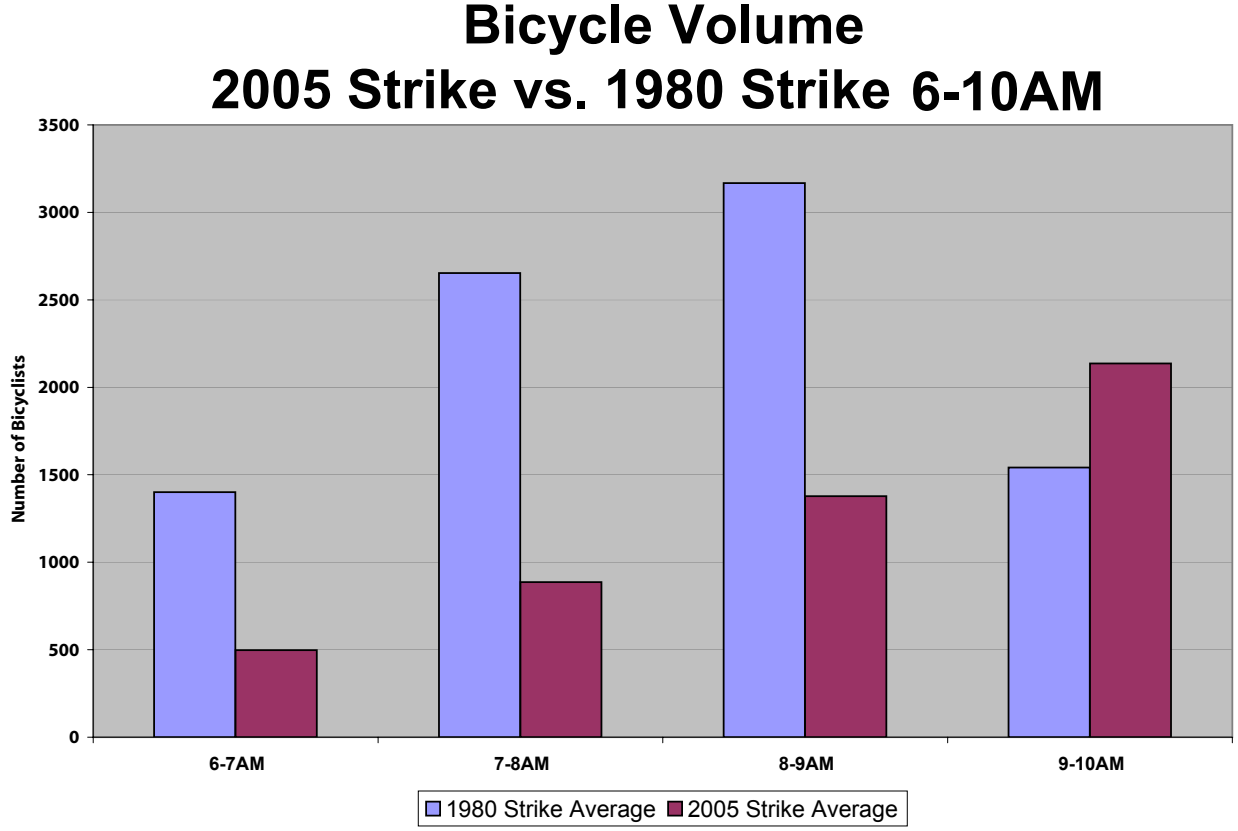


In 1980, data was collected only on the Brooklyn and Queensboro Bridges for the 6am-10am period because the paths on the Manhattan Bridge were closed and the Williamsburg Bridge paths were in poor condition. These paths were restored and are currently in pristine condition.

On an average day during the 2005 strike, 4,897 bicyclists entered Manhattan via the four East River Bridges, a 44% decrease from an average strike day in 1980 when 8,762 bicyclists entered Manhattan via the Brooklyn and Queensboro Bridges. This could be attributable to the climate difference between the 1980 strike which occurred in the spring and the 2005 strike which occurred in the winter. During the 2005 strike, all four East River bridges had lanes reserved for bicycle traffic. The highest average daily volume of cyclists was on the Queensboro Bridge with 3,323 cyclists followed closely by the Williamsburg Bridge with 3,282 and the Manhattan Bridge at 3,180. The Brooklyn Bridge had the fewest average daily number of cyclists (1,982) of any of the four East River bridges.

During the 6-10am period, the bicycle volume on the Queensboro Bridge decreased by 69% (to 1,468 from 4,713) and decreased by 79% on the Brooklyn Bridge (to 836 from 4,049) as compared to 1980.

The 60th Street Screenline exhibited similar characteristics to the four East River Bridges as volumes were significantly below 1980 strike levels but significantly above August 2005 levels. Southbound bicycle volumes between 6am and 10am were 208 on Broadway and 728 on Fifth Avenue, far below the volumes of 2,351 and 2,359 on these two roadways in 1980. However, the total volume of 1,784 bicyclists entering the CBD at the 60th Street Screenline between 7-10am during the strike was significantly higher than the 737 bicyclists crossing the Screenline on a typical day (from Hub-Bound Report 2002).



Although each hour between 6am and 9am experienced decreases of between 57% and 67% in the total number of cyclists, the hour between 9am and 10am experienced an increase of 39%.

Functioning Transit Services

Waterborne Transportation

Staten Island Ferry

During the three days of the strike, Staten Island Ferry daily ridership departing from the St. George Ferry Terminal decreased by 26% to 21,015 from 28,366 compared to three midweek days during the week of December 12th. Ridership during the 6-10am peak period decreased by 3% to 13,667 from 14,553. This is the opposite of what occurred during the 1980 strike when ridership on an average strike day in the 6am-9am peak period increased 74% to 31,388 from 18,000. In 1980, the peak period headways were 10 minutes (6 boats per hour) and in 2005 the headways were 15 minutes (4 boats per hour).

A possible reason for the ridership decrease during the 2005 strike compared to the week before the strike is that the connecting bus and subway service was not available. Regular Staten Island Ferry riders destined for locations other than Lower Manhattan may have opted for other alternatives such as carpools or going to New Jersey and using PATH trains.

The Department is currently utilizing an electronic counting system at turnstiles at both the St. George and Whitehall ferry terminals. The system is still in the testing and verification process. The daily passenger counts are somewhat lower than the passenger volumes that NYCDOT has previously reported and those during the 1980 strike. This may be attributed to:

- Seasonal Variations - December passenger volumes are generally lower than in the fall, summer and spring volumes due to the colder temperatures. The 1980 daily average strike and non-strike numbers were higher than those in 2005. Also, the tourist ridership is lower during the “winter” months.

- Express Bus Service – The non-strike passenger volume has competition from express bus service which was generally not available a quarter-century ago.

Private Ferry

Since 1986, New York Harbor has become home to the most extensive and best-used network of privately operated commuter ferries in the United States. As such, it represents a mode of transportation that did not exist at the time of the last transit strike in 1980. Five companies operate in the market, transporting approximately 35,000 passenger trips on a typical weekday. The overwhelming majority of the traffic is between New York and New Jersey, with New York Water Taxi operating a limited amount of intra-City service.

During the strike, average daily ridership on private ferries increased by approximately 50% to approximately 50,000 (in both directions). Demand response varied greatly by corridor. The strongest growth, of course was on the two enhanced intra-City services from Brooklyn Army Terminal (located near 58th Street and 1st Avenue in Sunset Park) to Pier 11 (Wall Street and South Street) and from Hunters Point in Long Island City to East 34th Street. Average daily ridership on the Brooklyn Army Terminal Route increased from approximately 230 to nearly 6,000. Daily ridership on the three Hunts Point-East 34th Street routes was approximately 2,700. Among the regular services, the greatest demand was on routes from Jersey City and Hoboken to Midtown and from Weehawken to Lower Manhattan. Demand for ferry service from Weehawken to Midtown was also strong. The popularity of ferries to Midtown from New Jersey may have been influenced by the presence of NY Waterway's crosstown bus system operating out of the Pier 79 terminal at West 39th Street. Demand for service on routes from Jersey City and Hoboken to Lower Manhattan generally experienced light to moderate increases. It is interesting to observe that demand on services from the southern portion of the region, specifically Monmouth County (Highlands, Atlantic Highlands, Belford) and Middlesex County (South Amboy) to Lower Manhattan was generally flat or lower than usual, although ridership from Monmouth to East 34th Street did increase. It is possible that the decreases resulted from the overall drop in commuting during the strike outweighing any modal shift towards ferries.

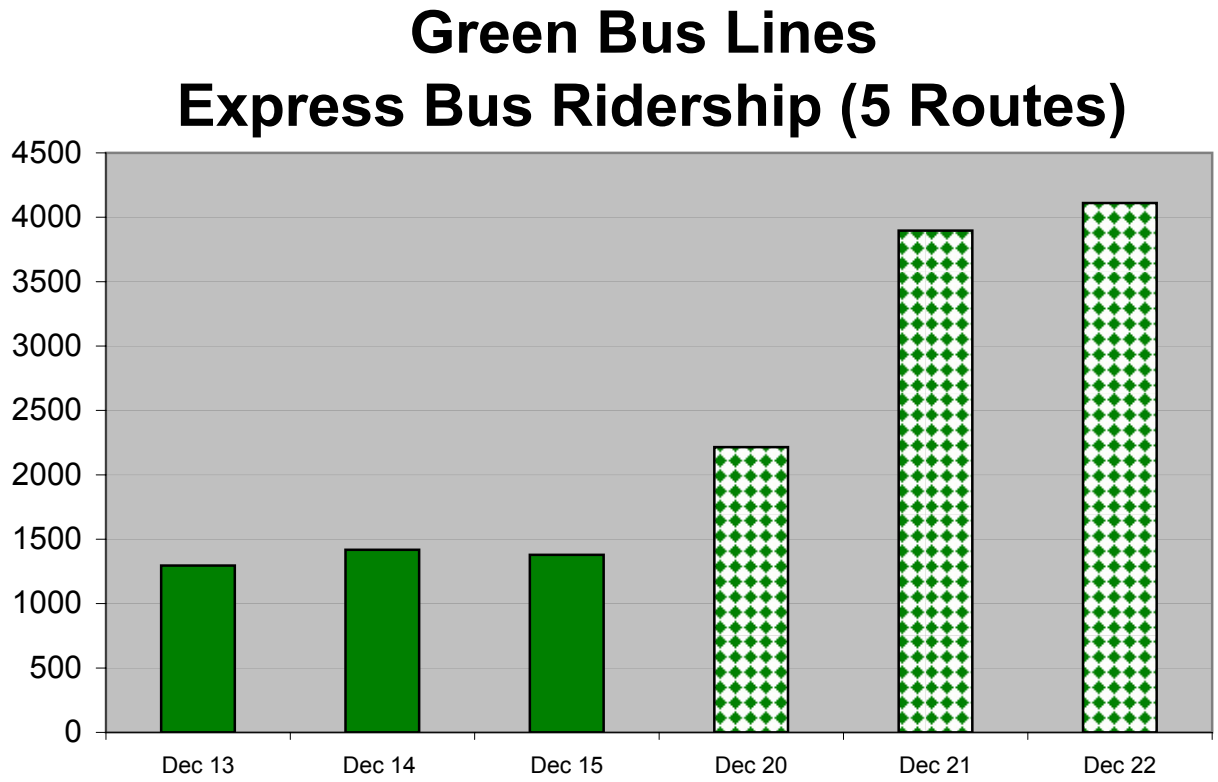
Private Bus Lines

During the 2005 transit strike, two bus operators provided service. Green Bus Lines operated under the control of the City while Command Bus operated as part of the newly created MTA Bus Company. Two private operators that were under the City's control, Triboro Coach Corporation and Jamaica Bus Lines, went on strike beginning on Monday December 19th.

Data was obtained for Green Bus Lines only. Ridership on the five express routes operated by Green Bus Lines increased significantly during the three strike days as compared to the Tuesday, Wednesday and Thursday of the previous week. The ridership on these lines increased by 150% to 3,407 from 1,364. The ridership on Day Three of the strike was 4,111, more than three times the midweek average from the previous week. This pattern was similar to the 1980 strike when daily express ridership on Green Bus Lines increased by 211% to 3,663 from 1,177.

However, ridership on local routes experienced a decline with the exception being the Q 60 which runs along Queens Boulevard and provides service to Manhattan. Average daily ridership on the Q 60 increased by 45% to an average of 18,260 from an average of 12,614 during the previous week. The ridership on Day Three was 21,900, an increase of 74% over the midweek average from the previous week. This was similar to the 80%

increased ridership that the Q 60 exhibited during the 1980 strike. On the two other local routes sampled, ridership declined by 48% to 16,892 from 32,690. The increase in express ridership may be attributed to it being a viable alternative to other Queens-Manhattan service that was unavailable due to the strike. The decrease in local bus ridership may be attributed, in part, to the inability to make transfers as many connecting routes were not operating due to the strike.



Commuter Rail/PATH Services

The MTA reported significantly higher than average ridership on both the LIRR and MNR during the strike as they provided an alternate means of transportation for locations within the City and a viable alternative for CBD-bound motorists that did not form carpools. For trains arriving between 6am and noon, the Penn Station inbound passenger volume on the LIRR averaged 146,000 during the strike, 60% above the average daily ridership of 91,000. For MNR trains stopping at Bronx stations between 5am and 11am ridership increased by over 40% - an additional 30,200 passengers a day to 103,570 from 73,370.

The Port Authority reported that total daily trips on the PATH trains averaged nearly 286,000 and peaked at 297,000 (an all-time high) on the third day of the strike, representing an increase of over 50% of an average December day. Increases were evident on trips in the off-peak direction (33rd Street to New Jersey) as riders traveled within Manhattan

(between 33rd Street and Christopher Street) or traveled to Lower Manhattan via New Jersey.

This increase in transit trips helped mitigate the congestion on the roadway system.

Taxicab Usage

In general, the licensee and passenger response to the zone fare system was a success with widespread reports, from both the media and field staff, that taxis, for-hire vehicles (FHVs) and commuter vans were operating across the entire City and filling up with the maximum number of passengers.

A taxicab fleet organization (Metropolitan Taxicab Board of Trade) indicated 98-99% of its taxicabs (approximately 2,000) were on the street all three mornings of the strike.

TLC field enforcement staff indicated heavy FHV and commuter van activity at key locations outside of the CBD including the Atlantic Avenue LIRR terminal, the Jamaica LIRR station, Yankee Stadium Metro-North temporary station, and the Harlem Metro-North station.

Intermodal transit hubs in the CBD (Whitehall Ferry Terminal, Penn Station, Grand Central) also reported significant taxicab activity with TLC enforcement staff occasionally playing an active role in organizing group rides.

CONCLUSIONS

There were many lessons learned from the experience of the 2005 Transit Strike that will be useful in planning for possible future strikes.

- Although private vehicles remain the primary mode of transportation, it is possible to achieve very high occupancy levels, making them more efficient.

- Even during the winter season, walking remains a viable option.

- Congestion worsened as the day progressed because many motor vehicles entered Manhattan later than normal (after the 5-11am HOV-4 restriction) and therefore left later. In addition, the restriction against commercial vehicle entering the CBD during the 5-11am period shifted deliveries to the afternoon and/or early evening.

- Enforcement of the HOV-4 restriction was extremely successful in reducing entries, as compared to 1980 when entries increased due to a less stringent HOV-2 restriction. Because of the significant decrease in volume, the additional capacity provided by the morning bridge and tunnel lane reversals was less essential than during the 1980 strike.

APPENDICES

APPENDIX I
CCTV Camera Locations

NYCDOT/ NYSDOT CCTV LIST

TRAFFIC MANAGEMENT CENTER CAMERA LOCATIONS

BORO	LOCATION	CONTROLLED BY
BKLYN	10 AVE. & PROSPECT EXP.	NYSDOT/JTOC
BKLYN	26 ST. & GOWANUS EXP.	NYSDOT/JTOC
BKLYN	36 ST. & GOWANUS EXP.	NYSDOT/JTOC
BKLYN	46 ST & GOWANUS EXP.	NYSDOT/JTOC
BKLYN	57 ST. & GOWANUS EXP.	NYSDOT/JTOC
BKLYN	6 AVE. & PROSPECT EXP.	NYSDOT/JTOC
BKLYN	63 RD. & GOWANUS EXP.	NYSDOT/JTOC
BKLYN	65 ST & 6 AVE.	NYSDOT/JTOC
BKLYN	66 STREET (Lower Gowanus)	NYSDOT/JTOC
BKLYN	7 AVE. & PROSPECT EXP.	NYSDOT/JTOC
BKLYN	72 STREET (Lower Gowanus)	NYSDOT/JTOC
BKLYN	85 STREET (Lower Gowanus)	NYSDOT/JTOC
BKLYN	88 STREET (Lower Gowanus)	NYSDOT/JTOC
BKLYN	9 AVE. & PROSPECT EXP.	NYSDOT/JTOC
BKLYN	ADAM ST @ TILLARY ST	NYCDOT/TMC
BKLYN	BELT PARKWAY @ 68 ST	NYCDOT/TMC
BKLYN	BELT PARKWAY @ ERSKINE AVE	NYCDOT/TMC
BKLYN	BELT PARKWAY @ FLATBUSH AVE	NYCDOT/TMC
BKLYN	BELT PARKWAY @ OCEAN PARKWAY	NYCDOT/TMC
BKLYN	BELT PARKWAY @ VERRAZANO NAROW BRG	NYCDOT/TMC
BKLYN	BQE @ BROKKLYN NAVY YARD	NYCDOT/TMC
BKLYN	BQE @ WBB APPROACH	NYCDOT/TMC
BKLYN	CATON AVE. & PROSPECT EXP.	NYSDOT/JTOC
BKLYN	CONGRESS STREET & HICKS **(out of service for next five months)**	NYSDOT/JTOC
BKLYN	FLATBUSH AVE @ TILLARY ST	NYCDOT/TMC
BKLYN	FORT HAMILTON AVE. & PROSPECT EXP.	NYSDOT/JTOC
BKLYN	FT. HAMILTON PKWY (Lower Gowanus)	NYSDOT/JTOC
BKLYN	GOWANUS EXP. & HAMILTON EXIT RAMP	NYSDOT/JTOC
BKLYN	GOWANUS EXPWAY @ 92 ST	NYCDOT/TMC
BKLYN	INTERSECTION OF GOWANUS & PROSPECT EXP.	NYSDOT/JTOC
BKLYN	KANE STREET & HICKS	NYSDOT/JTOC

NYCDOT/ NYSDOT CCTV LIST

BKLYN	MBR CAMERA26 @ NORTH UPPER RD, BKLYN TWR N.	NYCDOT/TMC
BKLYN	MBR CAMERA27 @ NORTH UPPER RD, BKLYN TWR S.	NYCDOT/TMC
BKLYN	MBR CAMERA28 @ LWR RDWY, BKLYN TWR	NYCDOT/TMC
BKLYN	MBR CAMERA29 @ SOUTH UPPER RD, BKLYN TWR N.	NYCDOT/TMC
BKLYN	MBR CAMERA30 @ SOUTH UPPER RD, BKLYN TWR S.	NYCDOT/TMC
BKLYN	MBR CAMERA31 @ NORTH UPPER RD, BKLYN MID	NYCDOT/TMC
BKLYN	MBR CAMERA32 @ SOUTH UPPER RD, BKLYN MID	NYCDOT/TMC
BKLYN	MBR CAMERA33 @ LWR RDWY, BKLYN ENTRANCE	NYCDOT/TMC
BKLYN	MBR CAMERA34 @ NORTH UPPER RD, BKLYN ENT.	NYCDOT/TMC
BKLYN	MILL ST. & GOWANUS CANAL	NYSDOT/JTOC
BKLYN	OVER THE GOWANUS CANAL	NYSDOT/JTOC
BKLYN	RNC01 @ BELT PKWY AND KNAP ST	NYCDOT/TMC
BKLYN	RNC06 @ (NEW LOCATION- RELOCATED)	NYCDOT/TMC
BKLYN	RNC07 @ 8 AVE AND 31 ST	NYCDOT/TMC
BKLYN	RNC11 @ BELT PKWY AND 14 ST	NYCDOT/TMC
BKLYN	SACKET ST. & HICKS	NYSDOT/JTOC
BKLYN	SEELEY & PROSPECT EXP.	NYSDOT/JTOC
BKLYN	WBB CAMERA1 @ BKLYN PLAZA	NYCDOT/TMC
BKLYN	WBB CAMERA13 @ NIR, BKLYN MIDSPAN	NYCDOT/TMC
BKLYN	WBB CAMERA14 @ NIR, BKLYN, KENT AVE	NYCDOT/TMC
BKLYN	WBB CAMERA18 @ SOR, CENTR SPAN	NYCDOT/TMC
BKLYN	WBB CAMERA19 @ BKLYN TWR	NYCDOT/TMC
BKLYN	WBB CAMERA2 @ NOR BKLYN, DRIGGS ST	NYCDOT/TMC
BKLYN	WBB CAMERA3 @ NOR, BKLYN ANCH	NYCDOT/TMC
BKLYN	WBB CAMERA4 @ NOR, BKLYN MIDSPAN	NYCDOT/TMC
BKLYN	WILLY BR AND BRKLYN ENT.	NYCDOT/TMC
BRX	BRUCKNER EXPWAY @ TRIBORO BRIDGE	NYCDOT/TMC
BRX	RAMP TO CROSS BRONX EXPRESSWAY	NYSDOT/JTOC
BRX	EXPRESSWAY RAMP TO SOUTHBOUND I-295 AND NORTHBOUND BRUCKNER	NYSDOT/JTOC
BRX	BETWEEN NORTHBOUND BRONX RIVER AND SOUTHBOUND CROSS BRONX	NYSDOT/JTOC
BRX	BETWEEN NORTHBOUND MAJOR DEEGAN TO NORTHBOUND CROSS BRONX	NYSDOT/JTOC
BRX	BETWEEN NORTHBOUND MAJOR DEEGAN TO NORTHBOUND CROSS BRONX	NYSDOT/JTOC
BRX	Hutchinson River Pkwy. Median South of Senger Place	NYSDOT/JTOC
BRX	Hutchinson River Pkwy. Northbound shoulder between Westchester avenue and Tremont avenue	NYSDOT/JTOC
BRX	MAJOR DEEGAN EXPWAY @ TRIBORO BRIDGE	NYCDOT/TMC

NYCDOT/ NYSDOT CCTV LIST

BRX	SOUTH OF 167TH STREET	NYSDOT/JTOC
BRX	SOUTHBOUND CROSS BRONX EXPRESSWAY TO NORTHBOUND MAJOR DEEGAN AND SEDGWICK	NYSDOT/JTOC
BRX	Median Between southbound Bruckner Expwy. And Bruckner Blvd. at Bronx River Pkwy. Overpass	NYSDOT/JTOC
BRX	Median Between southbound Bruckner Expwy. And Bruckner Blvd. at Quincy Avenue	NYSDOT/JTOC
BRX	NEW ENGLAND THRUWAY @ BARTOW AVE	NYCDOT/TMC
BRX	Shoulder of southbound Bruckner Expwy. At Castle Hill Avenue	NYSDOT/JTOC
BRX	Shoulder of southbound Cross Bronx Expwy. At Castle Hill Avenue	NYSDOT/JTOC
BRX	Shoulder of southbound Cross Bronx Expwy. At Randall Avenue	NYSDOT/JTOC
MANH	1 AVE AND 34 ST	NYCDOT/TMC
MANH	1 AVE AND 43 ST	NYCDOT/TMC
MANH	1 AVE AND 86 ST	NYCDOT/TMC
MANH	10 AVE AND 34 ST	NYCDOT/TMC
MANH	11 AVE AND 34 ST	NYCDOT/TMC
MANH	11 AVE AND 42 ST	NYCDOT/TMC
MANH	12 AVE AND 34 ST	NYCDOT/TMC
MANH	12 AVE AND 42 ST	NYCDOT/TMC
MANH	12 AVE AND 57 ST	NYCDOT/TMC
MANH	2 AVE AND 125 ST	NYCDOT/TMC
MANH	2 AVE AND 36 ST	NYCDOT/TMC
MANH	2 AVE AND 42 ST	NYCDOT/TMC
MANH	2 AVE AND 72 ST	NYCDOT/TMC
MANH	2 AVE AND QBB	NYCDOT/TMC
MANH	3 AVE AND 42 ST	NYCDOT/TMC
MANH	3 AVE AND 57 ST	NYCDOT/TMC
MANH	5 AVE AND 23 ST	NYCDOT/TMC
MANH	5 AVE AND 42 ST	NYCDOT/TMC
MANH	5 AVE AND 49 ST	NYCDOT/TMC
MANH	5 AVE AND 57 ST	NYCDOT/TMC
MANH	6 AVE AND 34 ST	NYCDOT/TMC
MANH	6 AVE AND 42 ST	NYCDOT/TMC
MANH	6 AVE AND 49 ST	NYCDOT/TMC
MANH	7 AVE AND 125 ST	NYCDOT/TMC
MANH	7 AVE AND 145 ST	NYCDOT/TMC
MANH	7 AVE AND 155 ST	NYCDOT/TMC
MANH	7 AVE AND 23 ST	NYCDOT/TMC

NYCDOT/ NYSDOT CCTV LIST

MANH	7 AVE AND 34 ST	NYCDOT/TMC
MANH	7 AVE AND 57 ST	NYCDOT/TMC
MANH	8 AVE AND 14 ST	NYCDOT/TMC
MANH	8 AVE AND 23 ST	NYCDOT/TMC
MANH	8 AVE AND 34 ST	NYCDOT/TMC
MANH	8 AVE AND 42 ST	NYCDOT/TMC
MANH	8 AVE AND 49 ST	NYCDOT/TMC
MANH	8 AVE AND COL CIR SOUTH	NYCDOT/TMC
MANH	9 AVE AND 34 ST	NYCDOT/TMC
MANH	9 AVE AND 37 ST	NYCDOT/TMC
MANH	9 AVE AND 57 ST	NYCDOT/TMC
MANH	AMST AND 178 ST	NYCDOT/TMC
MANH	AMST AND 72 ST	NYCDOT/TMC
MANH	AMSTERDAM AND 181 ST	NYCDOT/TMC
MANH	AMSTERDAM AVE AND 86 ST	NYCDOT/TMC
MANH	BROADWAY AND 42 ST	NYCDOT/TMC
MANH	BROADWAY AND 46 ST	NYCDOT/TMC
MANH	BWAY AND 169 ST	NYCDOT/TMC
MANH	BWAY AND 181 ST	NYCDOT/TMC
MANH	BWAY AND CHAMBERS	NYCDOT/TMC
MANH	BWAY AND COL. AVE	NYCDOT/TMC
MANH	BWAY AND FULTON ST	NYCDOT/TMC
MANH	BWAY AND HOUSTON	NYCDOT/TMC
MANH	CENTER ST AND BKLN BRG	NYCDOT/TMC
MANH	CHURCH AND VESEY	NYCDOT/TMC
MANH	CPS AND COL CIR EAST	NYCDOT/TMC
MANH	CPW AND 96 ST	NYCDOT/TMC
MANH	E. 57 ST AND QBB	NYCDOT/TMC
MANH	FDR ABD GRAND ST	NYCDOT/TMC
MANH	FDR DR AND 135 ST	NYCDOT/TMC
MANH	FDR DR AND 23 ST	NYCDOT/TMC
MANH	FDR DR AND 36 ST	NYCDOT/TMC
MANH	FDR DR AND 78 ST	NYCDOT/TMC
MANH	FDR DR AND 96 ST	NYCDOT/TMC
MANH	FDR DR AND CATHERINE	NYCDOT/TMC

NYCDOT/ NYSDOT CCTV LIST

MANH	FDR DR AND OLD SLIP	NYCDOT/TMC
MANH	FRED DOUG AND 110 ST (8 AVE AND 110 ST)	NYCDOT/TMC
MANH	GREENWICH AND MORRIS	NYCDOT/TMC
MANH	GWB APPROACH	NYCDOT/TMC
MANH	HARLEM RIVER DR AND WASH. BRG	NYCDOT/TMC
MANH	HENRY HUDSON PKWY @ 72 ST	NYCDOT/TMC
MANH	HENRY HUDSON PKWY AND 72 ST	NYCDOT/TMC
MANH	LEX AND 42 ST	NYCDOT/TMC
MANH	LL/CM AND YORK AVE	NYCDOT/TMC
MANH	MADISON AND 42 ST	NYCDOT/TMC
MANH	MADISON AVE AND 96 ST	NYCDOT/TMC
MANH	MALC. X. BLVD AND 135 ST	NYCDOT/TMC
MANH	MBR CAMERA16 @ LWR RDWY, MANH ENTRANCE	NYCDOT/TMC
MANH	MBR CAMERA17 @ LWR RDWY SOUTH, MANH	NYCDOT/TMC
MANH	MBR CAMERA18 @ LWR RDWY SOUTH, MANH MID	NYCDOT/TMC
MANH	MBR CAMERA19 @ NORTH UPPER RD, MANH MID	NYCDOT/TMC
MANH	MBR CAMERA20 @ SOUTH UPPER RD, MANH MID	NYCDOT/TMC
MANH	MBR CAMERA21 @ NORTH UPPER RD, MANH TWR N.	NYCDOT/TMC
MANH	MBR CAMERA22 @ NORTH UPPER RD, MANH TWR S.	NYCDOT/TMC
MANH	MBR CAMERA23 @ LWR RDWY, MANH TWR	NYCDOT/TMC
MANH	MBR CAMERA24 @ SOUTH UPPER RD, MANH TWR N.	NYCDOT/TMC
MANH	MBR CAMERA25 @ SOUTH UPPER RD, MANH TWR S.	NYCDOT/TMC
MANH	NOR AND FIRST AVE	NYCDOT/TMC
MANH	NOR AND YORK AVE	NYCDOT/TMC
MANH	PARK AVE AND 34 ST	NYCDOT/TMC
MANH	QBB AND 63 ST	NYCDOT/TMC
MANH	QNS PLAZA N	NYCDOT/TMC
MANH	RIVERSIDE DR AND 135 ST	NYCDOT/TMC
MANH	RIVERSIDE DR AND 153 ST	NYCDOT/TMC
MANH	RNC02 @ WEST ST AND CHAMBERS ST	NYCDOT/TMC
MANH	RNC03 @ 3 AVE AND 34 ST	NYCDOT/TMC
MANH	RNC10 @ 5 AVE AND 34 ST	NYCDOT/TMC
MANH	SOR AND FIEST AVE	NYCDOT/TMC
MANH	SOR AND SUTTON PL	NYCDOT/TMC
MANH	ST. NICHOLAS AND 145 ST	NYCDOT/TMC

NYCDOT/ NYSDOT CCTV LIST

MANH	ST. NICHOLAS AND 181 ST	NYCDOT/TMC
MANH	UNION SQ NORTH AND 16 ST	NYCDOT/TMC
MANH	UPRD/CM AND YORK AVE	NYCDOT/TMC
MANH	VARICK AND HOUSTON	NYCDOT/TMC
MANH	WBB CAMERA10 @ NIR AT FDR DR	NYCDOT/TMC
MANH	WBB CAMERA11 @ NIR AT MANH TWR	NYCDOT/TMC
MANH	WBB CAMERA12 @ NIR, MANH MIDSPAN	NYCDOT/TMC
MANH	WBB CAMERA21 @ SOR, MANH APPROACH	NYCDOT/TMC
MANH	WBB CAMERA22 @ SOUTH MANH TWR	NYCDOT/TMC
MANH	WBB CAMERA27 @ NORTH MANH TWR	NYCDOT/TMC
MANH	WBB CAMERA30 @ NOR, COLUMBIA ST	NYCDOT/TMC
MANH	WBB CAMERA5 @ NOR, MANH ON FDR	NYCDOT/TMC
MANH	WBB CAMERA6 @ DELANCY & CLINTON ST	NYCDOT/TMC
MANH	WEST ST AND 14 ST	NYCDOT/TMC
MANH	WEST ST AND 22 ST	NYCDOT/TMC
MANH	WEST ST AND CANAL ST	NYCDOT/TMC
MANH	WEST ST AND CLARKSON	NYCDOT/TMC
MANH	WEST ST AND MURRAY ST	NYCDOT/TMC
QNS	150 ST. ENTRANCE RAMP TO W/B BELT PKWY & N/B VWE	NYSDOT/JTOC
QNS	43 AVE AND 27 ST	NYCDOT/TMC
QNS	BELT PKWY @ 225 ST	NYCDOT/TMC
QNS	BQE @ BROADWAY	NYCDOT/TMC
QNS	BQE @ LAURELL HILL RD	NYCDOT/TMC
QNS	BQE AND 49 ST	NYCDOT/TMC
QNS	CLERAVIEW EXPWAY @ NORTHERN BLVD	NYCDOT/TMC
QNS	CROSS BAY BLVD. & N. CONDUIT AVE.	NYSDOT/JTOC
QNS	CROSS ISLAND PKWY @ THROGS NECK BRG	NYCDOT/TMC
QNS	CROSS ISLAND PKWY @ UNION TURNPIKE	NYCDOT/TMC
QNS	E/B LONG ISLAND EXPRESSWAY @ 48TH STREET	NYSDOT/JTOC
QNS	E/B LONG ISLAND EXPRESSWAY @ 55TH ROAD	NYSDOT/JTOC
QNS	E/B LONG ISLAND EXPRESSWAY @ 75TH STREET	NYSDOT/JTOC
QNS	E/B LONG ISLAND EXPRESSWAY @ 84TH STREET	NYSDOT/JTOC
QNS	E/B LONG ISLAND EXPRESSWAY @ B Q E	NYSDOT/JTOC
QNS	E/B LONG ISLAND EXPRESSWAY @ EAST OF 48TH STREET	NYSDOT/JTOC
QNS	E/B LONG ISLAND EXPRESSWAY @ GRAND CENTRAL EXP.	NYSDOT/JTOC
QNS	E/B LONG ISLAND EXPRESSWAY @ GRAND STREET	NYSDOT/JTOC
QNS	E/B LONG ISLAND EXPRESSWAY @ WEST OF 58TH STREET	NYSDOT/JTOC

NYCDOT/ NYSDOT CCTV LIST

QNS	GCP @ 31 ST (TRIBORO BRDGE)	NYCDOT/TMC
QNS	GCP AND BQE SPLIT	NYCDOT/TMC
QNS	GCP AND 49 ST	NYCDOT/TMC
QNS	GCP INTERCHANGE @ SHEA STADIUM	NYCDOT/TMC
QNS	LL/CM AND 11 ST	NYCDOT/TMC
QNS	LL/CM AND E /CHNNL	NYCDOT/TMC
QNS	LL/CM AND W/CHNNL	NYCDOT/TMC
QNS	LONG ISLAND EXPRESSWAY @ 27TH STREET	NYSDOT/JTOC
QNS	LONG ISLAND EXPRESSWAY @ 38TH STREET	NYSDOT/JTOC
QNS	LONG ISLAND EXPRESSWAY @ PULASKI BRIDGE	NYSDOT/JTOC
QNS	N/B B.Q.E. @ 54TH STREET	NYSDOT/JTOC
QNS	N/B B.Q.E. @ STEWART AVE.	NYSDOT/JTOC
QNS	N/B VAN WYCK @ 72nd AVENUE	NYSDOT/JTOC
QNS	N/B VAN WYCK @ BOOTH MEMORIAL	NYSDOT/JTOC
QNS	N/B VAN WYCK EXP. & 101 AVE.	NYSDOT/JTOC
QNS	N/B VAN WYCK EXP. & 133 AVE.	NYSDOT/JTOC
QNS	N/B VAN WYCK EXP. & QUEENS BLVD.	NYSDOT/JTOC
QNS	N/B VAN WYCK EXP. & QUEENS BLVD. EXIT RAMP	NYSDOT/JTOC
QNS	N/B VAN WYCK EXP. & ROCKAWAY BLVD.	NYSDOT/JTOC
QNS	N/B VAN WYCK EXP. & S. CONDUIT AVE.	NYSDOT/JTOC
QNS	NOR AND W / CHNL	NYCDOT/TMC
QNS	NORTHBOUND QUEENS BOULEVARD RAMP TO THE WESTBOUND LONG ISLAND EXPRESSWAY	NYSDOT/JTOC
QNS	QBB AND CRESCENT ST	NYCDOT/TMC
QNS	QNS BLVD AND E/B 36 ST	NYCDOT/TMC
QNS	QNS BLVD AND JACKSON AV	NYCDOT/TMC
QNS	QNS BLVD AND VANDAM	NYCDOT/TMC
QNS	QNS PLZ AND 27 ST	NYCDOT/TMC
QNS	RNC09 @ CPS AND 5 AVE RELOC. AT MASPETH SHOP	NYCDOT/TMC
QNS	S/B @ SANFORD AVENUE	NYSDOT/JTOC
QNS	S/B B.Q.E. EAST OF ST. LAWRENCE AVE	NYSDOT/JTOC
QNS	S/B VAN WYCK @ JEWEL AVENUE	NYSDOT/JTOC
QNS	S/B VAN WYCK EXP. & 82 AVE.	NYSDOT/JTOC
QNS	S/B VAN WYCK EXP. & ATLANTIC AVE.	NYSDOT/JTOC
QNS	S/B VAN WYCK EXP. & BETWEEN 106 & 107 AVE.	NYSDOT/JTOC
QNS	S/B VAN WYCK EXP. & BETWEEN 115 & 116 AVE.	NYSDOT/JTOC
QNS	S/B VAN WYCK EXP. & HOOVER AVE.	NYSDOT/JTOC
QNS	S/B/ VAN WYCK @ LONG ISLAND EXPRESSWAY	NYSDOT/JTOC

NYCDOT/ NYSDOT CCTV LIST

QNS	SOR AND W/CHNNL	NYCDOT/TMC
QNS	THOMSON AVE AND QBB	NYCDOT/TMC
QNS	TRIBORO BRIDGE @ RANDALLS ISLAND	NYCDOT/TMC
QNS	UPP RAMP AND 23 ST	NYCDOT/TMC
QNS	UPRD AND QUEENS PIER	NYCDOT/TMC
QNS	UPRD/CM AND ROOSE IS	NYCDOT/TMC
QNS	W/B BELT PKWY & CROSS BAY BLVD.	NYSDOT/JTOC
QNS	W/B LONG ISLAND EXPRESSWAY @ 58TH STREET	NYSDOT/JTOC
QNS	W/B LONG ISLAND EXPRESSWAY @ 99TH STREET	NYSDOT/JTOC
QNS	W/B LONG ISLAND EXPRESSWAY @ QUEENS BLVD.	NYSDOT/JTOC
QNS	WHITESTONE EXPRESSWAY @ 14TH AVENUE	NYSDOT/JTOC
QNS	WHITESTONE EXPRESSWAY @ 20TH AVENUE	NYSDOT/JTOC
QNS	WHITESTONE EXPWAY BRIDGE	NYCDOT/TMC
SI	OUTERBIDGE CROSSING @ TYRELLAN AVE	NYCDOT/TMC
SI	STATEN ISLAND EXPWAY @ RICHMOND AVE	NYCDOT/TMC
SI	STATEN ISLAND EXPWY @ CLOVE RD	NYCDOT/TMC
SI	WEST SHORE EXPWY @ VICTORY BLVD	NYCDOT/TMC

APPENDIX II
Monitoring Plan

MONITORING PLAN

Prompt response will be required to mitigate the effects of a transit strike or job action on vehicular flow. Therefore, an extensive surveillance and monitoring system will be established so that dynamic changes can be made in the operation of Manhattan's streets and river crossings. If a transit strike occurs this system will focus on, but will not be limited to, the following:

- Vehicle entries and exits into and out of Manhattan.
- Vehicle volumes on key arterials and limited access highways.
- Vehicle occupancy and classifications.
- Bicycle/pedestrian usage.
- Vehicle travel speeds.

COMPONENTS

An extensive surveillance and monitoring system has been developed to enable the department to make dynamic changes in the operation of Manhattan's streets and river crossings. Its components are as follows:

- The placement of 58 traffic recorders at 33 locations to measure vehicle entries and exits into Manhattan and vehicular volumes on key arterials and limited access highways.
- The assignment of 72 DOT staff members (plus supervisors) at critical locations citywide to collect information on the usage of carpool staging areas, vehicle occupancy and classifications, and bicycle/pedestrians volumes.
- The Data Collection Contractor will conduct continuous travel time and speed surveys on eleven designated routes
- The Traffic Management Center (TMC) will provide hourly travel time and speed for three designated routes.

In the event that a limited job action occurs, the monitoring effort will be confined to the East River crossings in order to predict effects on traffic flow. Automatic traffic recorders, manual traffic counts, and speed and travel time teams will supply information on vehicular volumes and speeds. In addition, reports from traffic engineers and police officers will be used to estimate conditions. Using these results, NYC DOT, in close conjunction with the Mayor's Office of Emergency Management, will coordinate the response of affected City agencies.

TRAFFIC MANAGEMENT CENTER CAPABILITIES

The TMC will be the focal point for all real-time traffic control for the duration of the transit strike. The TMC will be actively involved in the following three areas.

- Traffic Monitoring
- Traffic Signal Control
- Traveler Information

The following is a brief description of each element.

Traffic Monitoring

From the TMC, traffic engineers will be able to monitor traffic conditions via the traffic surveillance cameras (Appendix B) that the agency currently operates. In addition to key intersections in Manhattan, the TMC is able to view traffic conditions at major river crossings including the Queensboro, Williamsburg, Manhattan and Brooklyn Bridges. The TMC can also monitor traffic conditions in the immediate vicinity of the Battery, Holland, Lincoln and Midtown tunnels. In addition, utilizing agency owned and operated cameras, engineers can view traffic conditions along the FDR Drive and on selected segments of the Belt Parkway and Staten Island/West Shore Expressways.

In coordination with the State DOT, engineers are also able to monitor traffic conditions on selected segments of the following limited access highways:

- Cross Bronx Expressway
- Bruckner Expressway
- Major Deegan Expressway
- Van Wyck Expressway
- Long Island Expressway
- Whitestone Expressway
- Grand Central Parkway

Through the use of the IRVN system, our engineering staff at the TMC can view traffic conditions on various MTAB&T's and PANYNJ River crossings including the following:

- George Washington Bridge
- Holland Tunnel
- Lincoln Tunnel
- Midtown Tunnel
- Brooklyn Battery Tunnel

The TMC's network of video surveillance cameras will be the main source of real-time traffic information. On major roadways that are not instrumented, TMC personnel will rely upon observations by field personnel (both DOT and PD), arterial surveillance teams and traffic media reports.

The TMC will also utilize all vehicle detection equipment currently deployed within the city. Highways that are currently equipped with the technology include:

- Brooklyn Queens Expressway
- Gowanus Expressway
- Cross Bronx Expressway

Real-time traffic conditions (travel speeds) for all roadways and bridges within the city with vehicle detection equipment will be viewable to other city agencies and OEM via an internal password protected web link that has been successfully used for other major events such as the RNC.

This information will be used to gauge the effectiveness of the city's Contingency Plan and to develop strategies to mitigate congestion caused by excessive volume or unanticipated events. These mitigations include, but are not limited to, signal timing revisions, updating VMS or the dispatching of police personnel for on-site traffic control.

Traffic Signal Control

The TMC has the capability to update traffic signal timings at over 6,000 intersections on major arterial roadways (throughout the city) currently under Vehicular Traffic Control System (VTCS) control. This control allows our engineers to remotely modify signal timing and coordination enhancing our ability to handle varied and unpredictable traffic demand.

Experienced traffic engineers (supported by NYSDOT and NYPD personnel who are also located at this facility) will identify and react to changing conditions. From this location, traffic conditions can be monitored, signal timing plans modified and VMS messages updated.

Within Manhattan all of the traffic signals (with the exception of some on West Street and Riverside Drive) are under computer control. This enables TMC personnel to quickly implement traffic signal timing changes either at a particular intersection or along an entire corridor. Currently more than 25 separate timing plans have already been developed for each of the Manhattan Avenues to handle a variety of traffic conditions. When changes are needed for West Street or Riverside Drive these can be implemented onsite by timing engineers via a laptop computer.

In the remaining four boroughs, nearly all of the main arteries roadways are under computer control. For these arterials, we plan to extend the duration of the peak period signal progressions beginning as early as 5AM and continuing until at least 8PM. Our goal is to provide additional vehicular capacity in the peak direction of travel. However if an unanticipated condition occurs, timing changes can be quickly implemented. In these boroughs we also have developed a variety of pre-engineered timing plans to accommodate various conditions.

Our primary traffic control strategy will be to increase vehicular capacity (or through-put) along primary arteries throughout the city. However, if over-saturated conditions occur, timing patterns aimed at "metering" or staggering traffic arrivals may be implemented. By reallocating green time and adjusting offset coordination between traffic signals, the amount of vehicular traffic capable of reaching a particular location may be reduced. This type of strategy may be implemented on roadways approaching the East River crossings or at key junctions throughout the city.

Traveler Information

Finally the TMC also controls Variable Message Signs (VMS) (Appendix F) which allows for the immediate dissemination of accurate traffic information.

These signs have been specifically located to provide route guidance to users of the East River Bridges and portions of the FDR Drive and BQE immediately adjacent to these facilities. The TMC also has the ability to request that messages be displayed on the VMS under the jurisdiction of our regional transportation agency partners. Organizations such as the Port Authority of NY and NJ, the MTA Bridges and Tunnels, and New York State DOT all have VMS capabilities (see Appendix G) and work with us cooperatively when the need arises to reach motorists using their facilities. The TMC and the Office of Emergency Response will also relay appropriate messages to TRANSCOM for disbursement to other regional transportation providers.

Travelers will also have access to real-time video images via the agency's website (www.nyc.gov/dot).

MONITORING LOCATIONS

Occupancy and classification counts will be conducted at the 60th and 96th Street screenlines and the river crossings below 60th Street. Classification counts only will be conducted on reserved arterials in Manhattan. Occupancy counts only will be conducted on priority roadways.

Along the Manhattan CBD cordon and priority roadways, emphasis will be given to the morning peak direction of flow (5-11am). On reserved arterials, counts will be continuous during operational hours. In addition, a limited number of travel time runs and bicycle/pedestrians counts will be conducted as well as usage of some carpool staging areas will be monitored. Eleven travel time runs will be conducted by the traffic count contractor.

Data will be relayed by cell phone or Nextel to analysis personnel. Locations for field personnel assignments are listed below. Time period, traffic flow, direction to be counted and personnel staffing estimates are also included.

Vehicle Classification and Occupancy Counts:

60th Street Screenline (5-11AM)	**Number of Persons**
Second Avenue S/B AM	1
Lexington Avenue S/B AM	1
Park Avenue S/B and N/B All Day	4
Madison Avenue N/B All Day (Classification Only, including bicycles)	2
Fifth Avenue S/B All Day (Classification Only, including bicycles)	2
Broadway S/B AM	1
Columbus Avenue S/B AM	1
West Side Highway S/B AM	1
Sub-total	**13**

96th Street Screenline (5-11AM)	**Number of Persons**
FDR Drive Service Road	1
2nd Avenue	1
Lexington Avenue	1
Park Avenue	1
5th Avenue	1
Central Park's West Drive	1
Central Park West	1
Columbus Avenue	1
Broadway	1
West End Avenue	1
Riverside Drive	1
Sub-total	**11**

River Crossings Below 60th Street (5-11AM)	**Number of Persons**
Queensboro Bridge W/B AM,	3
Queens-Midtown Tunnel W/B AM,	2
Manhattan Bridge W/B AM,	2
Williamsburg Bridge W/B AM,	2
Brooklyn-Battery Tunnel N/B AM,	2
Lincoln Tunnel E/B AM,	1
Holland Tunnel E/B AM,	2
Brooklyn Bridge W/B AM,	1
Sub-total	**15**

Priority Roadways - Occupancy Only- (5-11AM)	**Number of Persons**
FDR Drive and West Side Highway will be counted at the 60th Street Screenline	
Long Island Expressway W/B AM @ City Line	1
Gowanus Expressway N/B AM @ 92nd Street	1
Bruckner Expressway W/B AM @ Bruckner Interchange	1
Sub-total	**3**

Reserved Arterials - Classification Only (5AM-8PM)	**Number of Persons**
49th and 50th Street Alternately (between 5th and 6th Avenues)	2
26th and 29th Streets Alternately (between 5th and 6th Avenues)	2
Sub-total	**4**

Non-Restricted CBD Locations – (5AM-8PM) (Classification and Occupancy)	**Number of Persons**
53rd - 54th Street Alternately (between 5th & 6th Ave.)	2
35th - 36th Streets Alternately (between 5th & 6th Ave.)	2
Sub-total	**4**

Bicycle/Pedestrian Counts – (5AM-8PM)	**Number of Persons**

Bicycles will be counted at the 60th Street screenline and on all reserved arterials as part of the classification counts.

Brooklyn Bridge AM, PM*	2
Queensboro Bridge AM, PM	4
Manhattan Bridge AM, PM*	2
Williamsburg Bridge AM, PM*	2
Sub-total	**10**

***To be counted at the TMC**

Carpool Staging Areas- (5-11AM)

	Number of Persons
Flushing 1-4	4
Astoria	1
Sunnyside	1
St. George	1
Ferry Terminals 1 & 2	2
White Plains Road	1
Gowanus	1
Steinway 1	1
Sub-total	**12**

Contractor to Report Occupancy 2X daily at the following locations:

Municipal Garages

149th Street Garage (Contractor)
Jerome Street/190 Street
Bay Ridge Garage
Queens Plaza Garage
Court Square Garage
Queensboro Hall Garage

Total DOT Personnel Required: 72

Vehicular Travel Times (5AM-8PM) –to be done by contractor, no field personnel needed.

Manhattan CBD (3 crews all day)

6th Ave./Broadway-7th Avenue between
Central Park South and 23rd Street and
2nd/3rd Avenues between
79th and 23rd Streets

Park Ave and Madison/5th Avenue
between 79th and 23rd Streets

49th/50th St. and 53rd/54th Street
between 1st and 8th Avenues

Queens (3 crews all day)

Long Island Expressway between the
Cross Island Parkway and Queens-Midtown Tunnel

Northern Boulevard between the
Cross Island Parkway and Queens Plaza

Brooklyn-Queens Expressway/Grand Central Parkway
between the Triboro Bridge and the Williamsburg Bridge*

Brooklyn (2 crews all day)

Gowanus Expressway between the
Verrazano Bridge and the Brooklyn Battery Tunnel*

Flatbush Avenue between Kings Highway
and the Manhattan Bridge (Tillary Street)

Bronx (1 crew all day)

Grand Concourse Between Mosholu Parkway
and the Madison Avenue Bridge (East 138th Street)

Major Deegan Expressway between the city line
and the Madison Avenue Bridge (East 138th Street)*

Bronx-Manhattan (2 crews all day)

Henry Hudson Parkway between the city line
and 72nd Street

Bruckner Expressway/FDR Drive between the
Bruckner Interchange and 63rd Street

*The Management Center will be providing travel time and speed from the TRANSMIT system at these locations as well as on the **Staten Island Expressway between the Goethals Bridge and the Verrazano Bridge.**

Automatic Traffic Recorder Counts

Listed below are the automatic traffic recorder count locations (in priority order).

Location	**Number of Machines**
I. **60th Street Screenline**	
FDR Drive	3
York Avenue	2
1st Avenue	1
2nd Avenue	1
3rd Avenue	1
Lexington Avenue	1
Park Avenue	2
Madison Avenue	1
Fifth Avenue	1
Avenue of the Americas	1
Broadway	2
7th Avenue	1
Central Park West	1
Columbus Avenue	1
Amsterdam Avenue	1
West End Avenue	2
West Side Highway	2
New Street	1
Sub-total	**25**
I. **Manhattan Bridge Crossings**	
Brooklyn	2*
Manhattan	3*
Williamsburg	4
Queensboro	4*
Sub-total	**13**

*Volumes will be monitored hourly between the hours of 5-11 AM. All other machines will be picked up after 12M and downloaded the following morning.

III. **Interior Borough Locations**	**Number of Machines**
35th, 36th, 53rd and 54th Streets between 5th and 6th Avenues	4
Gowanus Expressway between 54th and 55th Streets	2
Grand Central Parkway at 90th Street	2
Bruckner Expressway at East 149th Street	2
Sub-total	**10**

IV. **City Line Locations**

Long Island Expressway (includes Service Roads)	4
Grand Central Parkway	2
New England Thruway	2
Bronx River Parkway	2
Sub-total	**10**
Total Machines Required	**58**

APPENDIX III
Permanent VMS Locations

REGIONAL VMS LOCATIONS

NYCDOT VMS LIST

Borough	VMS	LOCATION	TYPE	COMMENTS
Bronx	VMS-10	S/B Hutchinson River Pkwy at E. Tremont Ave.	FIXED	
Bronx	VMS-11	S/B I-95 at Westchester Ave.	FIXED	
Bronx	VMS-1	S/B 138 St. at Service Rd from Madison Ave Brg.	FIXED	
Bronx	VMS-2	S/B 3 Ave underpass at Major Deegan	FIXED	
Brooklyn	VMS-7	Brooklyn Entrance (WESTBOUND)	FIXED	
Brooklyn	VMS-5	Lower Roadway facing Brooklyn	FIXED	
Brooklyn	VMS-6	Lower Roadway facing Brooklyn	FIXED	
Brooklyn	VMS-4	North Upper Roadway facing Brooklyn	FIXED	
Brooklyn	VMS-3	S/B BQE at Frost St. (near entrance ramp of WBB)	FIXED	
Manhattan	VMS-1	Bowery and Canal Manhattan Bridge entrance from Manhattan side (facing eastbound traffic)	FIXED	
Manhattan	VMS-7	S/B FDR Drive at 10th St. (on pedestrian overpass)	FIXED	
Manhattan	VMS-2	Lower Roadway facing Manhattan	FIXED	
Manhattan	VMS-3	N/B FDR Drive at 111 St.	FIXED	
Manhattan	VMS-6	N/B FDR Drive at Jackson St.	FIXED	
Manhattan	VMS-5	N/B FDR Drive at Old Slip.	FIXED	
Manhattan	VMS-3	South Upper Roadway facing Manhattan	FIXED	
Queens	VMS-2	W/B BQE, 800 ft. west of 58th St.	FIXED	
Queens	VMS-1	W/B LIE at 73rd St. (on pedestrian overpass)	FIXED	
StatenIsland	VMS-12	Staten Island Expwy at Todt Hill Rd	FIXED	
Manhattan	VMS-10	FDR S/B, at 130 St.	PORTABLE	connected to street light pole
Manhattan	VMS-4	W/B Queens Plaza North at 28 St	PORTABLE	connected to street light pole

NYSDOT VMS LIST

Borough	VMS	LOCATION	TYPE
Bronx	VMS-9	BRUCKNER EXPWY. NORTHBOUND AT EAST 149TH STREET AND BRUCKNER BLVD	FIXED
Bronx	VMS-5	EASTBOUND BRUCKNER WEST OF WHITE PLAINS ROAD	FIXED
Bronx	VMS-2	NORTHBOUND CROSS BRONX EXPRESSWAY EAST OF OLMSTEAD AVENUE	FIXED
Bronx	VMS-1	NORTHBOUND CROSS BRONX EXPRESSWAY WEST OF PARK AVENUE	FIXED
Bronx	VMS-6	NORTHBOUND MAJOR DEEGAN EAST OF WILLIS AVENUE	FIXED
Bronx	VMS-8	SOUTHBOUND BRONX RIVER PARKWAY NORTH OF ALLERTON AVENUE / MOSHOLU PARKWAY	FIXED
Bronx	VMS-3	SOUTHBOUND CROSS BRONX EXPRESSWAY EAST OF BATHGATE AVENUE	FIXED
Bronx	VMS-7	SOUTHBOUND MAJOR DEEGAN APPROXIMATELY 630 M NORTH OF FORDHAM ROAD CENTERLINE	FIXED
Queens	VMS-3	84th Street	FIXED
Queens	VMS-4	99th Street	FIXED
Queens	VMS-8	Broadway (BQE)	FIXED
Queens	VMS-7	Lawrence Street	FIXED
Queens	VMS-9	Roosevelt Ave. (VWE)	FIXED
Queens	VMS-6	Scott Ave. (O	FIXED
Queens	VMS-5	Woodhaven Blvd.	FIXED
StatenIsland	VMS-1	E/B S.I.E. @ CLOVE RD.	FIXED
StatenIsland	VMS-3	E/B S.I.E. @ RICHMOND AVENUE	FIXED
StatenIsland	VMS-2	W/B S.I.E. @ RICHMOND RD.	FIXED
StatenIsland	VMS-4	W/B S.I.E. @ SOUTH AVENUE	FIXED

APPENDIX IV
No Standing Regulation Locations

TREATMENTS ON MAJOR ARTERIAL ROADWAYS

The "No Standing" regulations on certain major arterials will be extended in the peak direction to include the hours of 5-11 AM and 2-8 PM. These arterials are listed below. In addition, "No Parking" regulations will be in effect during other hours for the duration of the strike.

MANHATTAN

- 181st Street–Amsterdam Avenue to St. Nicholas Avenue (north side–AM; south side–PM)
- 145th Street – Lenox Avenue to Frederick Douglass Boulevard (both sides – AM/PM); Frederick Douglass Boulevard to Bradhurst Avenue (north side – AM; south side – PM)
- 125th Street – 2nd Avenue to Lexington Avenue (both sides – AM/PM); Broadway to 12th Avenue (both sides – AM/PM)
- 96th Street – 1st Avenue to Lexington Avenue (south side – AM; north side – AM/PM); Broadway to Riverside Drive (both sides – AM/PM)
- 72nd Street – West End Avenue to Riverside Drive (both sides – AM/PM)
- 57th Street – FDR Drive to 12th Avenue (both sides – AM/PM)
- 42nd Street – FDR Drive to 12th Avenue (both sides – AM/PM)
- 34th Street – FDR Drive to 12th Avenue (both sides – AM/PM)
- 23rd Street – 10th Avenue to West Side Highway (both sides – AM/PM)
- Houston Street – Greenwich Street to West Side Highway (both sides – PM); FDR Drive to Pitt Street (south side – PM)
- Delancey Street – Williamsburg Bridge to Allen Street (north side – AM; south side – AM & PM)
- Canal Street – East Broadway to Holland Tunnel (both sides – AM/PM)
- First Avenue – 60th Street to 34th Street (both sides – AM/PM)
- Second Avenue – 65th Street to 32nd Street (both sides – AM/PM)
- Third Avenue – 59th Street to 34th Street (both sides – AM/PM)
- Ninth Avenue – 57th Street to 30th Street (west side – AM; eastside – PM)
- Tenth Avenue – 42nd Street to 31st Street (west side – PM; eastside – AM/PM)

BROOKLYN

- Flatbush Avenue - Kings Highway to the Manhattan Bridge (eastside-AM; west side-PM)
- Coney Island Avenue - Kings Highway to Park Circle (eastside - AM; west side - PM)
- Hamilton Avenue-Third Avenue to Brooklyn-Battery Tunnel (east side-AM; west side-PM)
- Atlantic Avenue-Eastern Parkway to the Brooklyn-Queens Expressway (north side-AM; south side-PM)
- Fourth Avenue - 60th Street to Flatbush Avenue (south side - AM; north side - PM)
- Third Avenue - 60th Street to Hamilton Avenue (south side - AM; north side - PM)
- Pennsylvania Avenue - Belt Parkway to Jackie Robinson Parkway (east side – AM; west side – PM)

BRONX

- Grand Concourse - 161st Street to 138th Street (west side - AM; eastside - PM)
- Broadway - Van Cortlandt Park to the Broadway Bridge (west side - AM; eastside - PM)

QUEENS

- Queens Boulevard - Roosevelt Avenue to the Queensboro Bridge (north side - AM; south side - PM)
- Northern Boulevard - Grand Central Parkway to the Queensboro Bridge (north side - AM; south side - PM)
- Astoria Boulevard - Grand Central Parkway to 31st Street (north side - AM; south side - PM)
- Roosevelt Avenue - Grand Central Parkway to Queens Boulevard (north side - AM; south side - PM)
- Metropolitan Avenue - Woodhaven Boulevard to the Brooklyn-Queens Expressway (north side - AM; south side - PM)

STATEN ISLAND

- Victory Boulevard - Forest Avenue to Bay Street (south side - AM; north side - PM)
- Bay Street - entire length (eastside - AM; west side - PM)
- Hylan Boulevard – Steuben Street to Guyon Avenue (Rush Hour Regulations in effect 6-9am & 4-7pm presently).

APPENDIX V
Pedestrian and Bicycle Facilities

PEDESTRIAN/BICYCLE ACCESS TO MANHATTAN

Queensboro Bridge Manhattan – E.60th Street
Queens - Queens Plaza

**Cones will be used to separate bicycle and vehicular traffic and a "No Standing" regulation will be posted along the north curbside of Queens Plaza between Crescent Street and 29th Street leading to and from the bridge in Queens.*

Brooklyn Bridge Manhattan - Park Row & Frankfort Streets
Brooklyn - Tillary & Adams Streets

**Cones will be used to separate bicycle and vehicular traffic and a "No Standing" regulation will be posted along each curbside of Adams Street between Tillary Street and Atlantic Avenue leading to and from the bridge in Brooklyn.*

Williamsburg Bridge Manhattan - Clinton & Delancey Streets
Brooklyn –Bedford Avenue between South 5th and
South 6th Streets

** Cones will be used to separate bicycle and vehicular traffic and a "No Standing" regulation will be posted along each curbside of Delancey Street between Bowery and Clinton Street leading onto the bridge in Manhattan.*

Manhattan Bridge Manhattan – Bowery & Canal Street
Brooklyn – Jay Street between Fulton & Sands Streets

[Class II bike routes via Sands Street (westbound), Adams Street (northbound), Navy Street and Jay Street (southbound) will be utilized.]

Willis Avenue Bridge Manhattan - 1st Avenue, 125th Street
Bronx - Willis Avenue, 134th Street

Third Avenue Bridge Manhattan - 129th Street
Bronx - 135th Street

Madison Avenue Bridge Manhattan - Madison and Fifth Avenues
Bronx - 138th Street

145th Street Bridge Manhattan - West 145th Street
Bronx - East 145th Street

Macombs Dam Bridge Manhattan - West 155th Street
Bronx - Jerome Avenue

Washington Bridge Manhattan - West 181st Street
Bronx - University Avenue

Broadway Bridge Manhattan - Broadway near West 225th Street

Manhattan Bridge Manhattan – Bowery and Canal Street
Brooklyn – Jay Street and Sands Street

George Washington Bridge Manhattan – 177th Street, 178th Street, and Cabrini Boulevard

BICYCLE/PEDESTRIAN ACCESS TO MIDTOWN AND LOWER MANHATTAN

Selected Manhattan Class II bike lanes and the curb lane adjacent to each will provide access to Midtown and Lower Manhattan. Cones will be used to separate bicycle and vehicular traffic and a "No Standing" regulation will be posted at the curbsides. In addition to the above, north/south commuter bicycle traffic can use the Central Park bike lane.

- **Broadway** - Columbus Circle to Chambers Street. To provide access to Lower Manhattan, the east curb will be reserved for bicyclists.
- **Fifth Avenue** - Madison Square to Washington Square Park
- **Avenue of the Americas** – West Eighth Street to Central Park South. To provide access to the Central Park bike lane, west curb lane will be reserved for bicyclists between West 42nd Street and Central Park South.
- **Lafayette Street/Fourth Avenue** – Spring Street to East 14th Street
- **Second Avenue** – East 14th Street to East Houston Street
- **Adam Clayton Powell Jr. Boulevard** – Central Park to West 118th Street (2-way)
- **St. Nicholas Avenue** – West 117th to West 168th Streets (2-way)
- **Hudson Street/Eighth Avenue –** Canal Street to West 14th Street
- **Delancey Street (north and south curbs)** – Clinton Street to Bowery
- **Bowery (east and west curbs)** – Worth Street to Grand Street
- **Queens Plaza North (north curb)** – Crescent Street to 29th Street

ADDITIONAL BRIDGES HAVING PEDESTRIAN/BICYCLE ACCESS

Cropsey Avenue	Cropsey Avenue, Brooklyn over Coney Island Creek
Third Avenue	Third Avenue, Brooklyn over 5th Street Basin
Ocean Avenue	East 19th Street, Brooklyn over Sheepshead Bay
Fresh Kills	Richmond Avenue, Staten Island over Richmond Creek
Greenpoint Avenue	Greenpoint Avenue, Brooklyn & Queens over Newtown Creek
Grand Street	Grand Street, Brooklyn & Queens over Newtown Creek
Borden Avenue	Borden Avenue, Queens over Dutch Kills
Flushing	Northern Boulevard, Queens over Flushing River
Little Neck	Northern Boulevard, Queens over Alley Pond Creek
Hunters Point Avenue	Hunters Point Avenue, Queens over Dutch Kills
Hook Creek	Rockaway Blvd, Queens over Hook Creek Rockaway Turnpike. Nassau County
North Channel	Cross Bay Boulevard, Queens over North Channel
Roosevelt Avenue	Roosevelt Avenue, Queens over Flushing River
Hawtree Basin	163rd Avenue, Queens over Hawtree Basin
174th Street	East 174th Street, Bronx over the Bronx River
Mill Basin	Shore Parkway, Brooklyn over Mill Basin
Hutch. River Pkwy.	Hutchinson River Parkway over Eastchester Creek
Randalls Island	East 103rd Street over the East River
Pulaski	McGuinness Boulevard and Eagle Street, Brooklyn over Newtown Creek to Jackson Avenue and 11th Street

Roosevelt Island	36th Avenue, Queens to Roosevelt Island to 60th Street and Second Avenue via Tramway
Rikers Island	Rikers Island, Bronx over the East River
Triborough Bridge	Queens-Bronx-Manhattan over the East River [Note: Someone should contact MTA Bridges & Tunnels to ensure that the bike/pedestrian path on the Triborough Bridge is in serviceable condition. Ongoing construction and general neglect have taken their toll.]
Westchester Avenue	Westchester Avenue – Bx. River Ave. over the Bronx River
Unionport	Bruckner Boulevard and Zerega Avenue, Bronx, over Westchester Creek
Pelham	Bruckner Blvd and Pelham Br. Rd over Eastchester Bay
City Island	City Island Road - City Island Avenue, Bronx
Eastchester	Bos. Rd at 233 St over the Hutchinson River
Hamilton Avenue	Hamilton Ave, Bklyn over the Gowanus Canal
Ninth Street	Ninth Street, Brooklyn over the Gowanus Canal
Union Street	Union Street, Brooklyn over the Gowanus Canal
Bronx Whitestone	Bus Service (via the QBx-1) is provided between the Hutchinson River Parkway Service Road at Lafayette Avenue in the Bronx and the Whitestone Expressway Service Road at 20th Avenue in Queens.

ADDITIONAL ROADWAYS AND PARKS HAVING DESIGNATED BICYCLE ROUTES

BRONX

Bronx Park East	Dr. Theodore Kazimiroff Blvd. and Pelham Pkwy North.
Burr Ave	Pelham Pkwy. South and Westchester Ave.
Dr. Theodore Kazimiroff Blvd	Mosholu Pkwy. and Bronx Park East
Pelham Pkwy North.	Bronx Park East and Stillwell Ave
Pelham Pkwy South	Stillwell Ave. and Burr Ave.
Mosholu Parkway.	Jerome Ave. and Dr. Theodore Kazimiroff Blvd.

BROOKLYN.

Cadman Plaza West.	Tillary St. and Clark St.
Clark Street.	Cadman Plaza West to Henry Street.
Clinton Street	Joralemon Street to Cadman Plaza West; Second Place to Joralemon St.
Flatbush Avenue.	Hendrickson Place and Marine Pkwy. Bridge
Fourth Avenue	Second Street to Third Street
Henry Street	Clark Street to Amity Street; Amity Street to Sackett Street; Sackett St. to Union St.
Marine Park	Park Path loop-Avenue U/Stewart St./Fillmore Ave./East 33rd St.

Ocean Parkway	East 8th Street and Seabreeze Avenue
Park Circle	Prospect Park S.W./Fort Hamilton Pkwy./Coney Island Ave./Parkside Ave.
Prospect Park	Loop Drive-Parkside Ave./Ocean Ave./Flatbush Ave/ Prospect Pk. West/Prospect Pk.S.W.
Prospect Park	West Third Street to Second Street
Riegelman Boardwalk (Coney Island)	West 37th St. and Brighton 14th St.
2nd Place	Smith Street to Clinton Street
Second Street	Prospect Park West to Fourth Ave.
Shore Parkway East	Knapp Street and Cross Bay Blvd.
Shore ParkwayWest	Bay Ridge Ave. and Bay Parkway
Surf Avenue West	5th Street and West 37th Street
Third Avenue	Union Street to Third Street
Third Street	Fourth Avenue to Seventh Avenue; Seventh Avenue to Prospect Park West; Third Avenue to Fourth Avenue, Third Avenue to Smith Street
Tillary Street	Cadman Plaza West and Adams Street
Union Street	Henry Street and Third Avenue
Bedford Avenue	Emmons Avenue and Dean Street

MANHATTAN

Riverside Drive	West 72nd Street and West 120th Street

QUEENS

Cross Island Parkway	Northern Boulevard and Fort Totten
Flushing Meadows-Corona Park	Park Path-Jewel Avenue/Kissena Park Corridor/Main St.
Forest Park	Park Drive-Myrtle Avenue and Woodhaven Blvd./Woodhaven Blvd. and Park Lane.
Jewel Avenue	Flushing Meadows-Corona Park and 141st Street
J.F.K. Intl.	North Boundary Road between 150th Street and Old Rockaway
Airport	Blvd./130th Place/North and South Service Roads/ Nassau Expressway and Parking Lot #7
Vanderbilt Motor Pkwy	Horace Harding Blvd. and Alley Pond Park
73rd Avenue	141st Street and Francis Lewis Blvd.
141st Street	Jewel Avenue and 73rd Avenue

STATEN ISLAND

Bay Street	St. George Ferry Terminal and School Road
Father Capodanno Blvd.	Lily Pond Avenue and Midland Avenue
Lily Pond Avenue	School Road and Father Capodanno Blvd.
Midland Avenue	Father Capodanno Blvd. and Hylan Blvd.
School Road	Bay Street and Lily Pond Avenue

Greenways

Bronx

Bronx River Greenway: East 233rd to Mosholu Parkway
Mosholu Parkway:Dr. Theodore Kazimiroff Boulevard to Van Cortlandt Park (replace existing listing)
Pelham Parkway Greenway: Bronx Park East to City Island (replace existing "Pelham Pkwy North" and "Pelham Pkwy South"
Soundview Greenway: O'Brien Avenue to Lafayette Avenue
Macombs Mosholu Greenway: Macombs Dam Bridge to Van Cortlandt Park

Brooklyn

Ocean Parkway Greenway: Church Avenue to Surf Avenue (replace existing listing)
Eastern Parkway Greenway: Eastern Parkway Extension to Grand Army Plaza
Gateway Greenway: Hendrickson Place to Marine Parkway Gil Hodges Memorial Bridge
Brooklyn Queens Greenway: Heath Place to Jackie Robinson Parkway

Manhattan

Hudson River Greenway: Dyckman Street to the Battery
Harlem River/East River Greenway: Dyckman Street to the Battery St.
(Mid-Island alternative: Dyckman Street and the Harlem River to St. Nicholas to Central Park to Midtown)

Queens

Brooklyn Queens Greenway: Jackie Robinson Parkway to Cross Island Parkway/Alley Pond Park
Flushing Bay Promenade: approx 24th Avenue to approx 127th Street
Hallets Point Promenade: Vernon Boulevard to 27th Avenue
Rockaway Boardwalk Greenway: Beach 126th Street to Beach 19th Street and Marine Parkway Bridge to Jacob Riis Boardwalk
Brookville Park Greenway: South Conduit Avenue to 147th Avenue

Staten Island

South Beach Greenway: Fort Wadsworth to Sea View Avenue
North Shore Greenway: Jersey Avenue to Victory Boulevard
Conference House Greenway: Page Avenue to Hyland Boulevard
Bloomingdale Park Greenway: Enevar/Ramona/Bloomingdale
Willowbrook Park Greenway: Eton from Richmond Avenue to Victory Boulevard
Gateway Great Kills Greenway: Hyland Boulevard to Buffalo Street

Indoor Bicycle Parking

The following garages allow you to park your bike indoors. Remember to bring back a lock. Parking is free, unless otherwise indicated. Please note that locations that are privately owned may change their rates or may limit the number of spaces based on availability.

Manhattan

105 Essex Street (north of Delancey Street)
345 Park Avenue (at 52nd Street) $2.50 a day – privately owned
30 Park Avenue (at 36th Street) $2.50 a day – privately owned
211 E. 71st Street (east of 3rd Avenue) $1.00 a day – privately owned
112 W. 25th Street (at 6th Avenue) – privately owned
80 Pine Street $2.50 a day – privately owned

Bronx
Jerome Avenue at 190th Street

Brooklyn
Livingston Street at Bond Street

Queens
Court Square (near Jackson Avenue)
90th Avenue (between Parsons Blvd. and 160th Street) – privately owned
Queens Borough Hall
Queens Plaza South at Jackson Avenue

APPENDIX VI
Commuter Rail

Long Island Rail Road

New York City Transit Strike Contingency Plan

While it is illegal under New York State law for New York City Transit subway and bus employees to strike, it is possible that a strike may occur on or after December 16, when their contract expires.

In the event of a strike, Long Island Rail Road service will be affected. Travel options for subway and bus riders will be limited, and contingency services will not be in place for 24 hours after the strike begins.

Expect lines, long waits, and delays. LIRR staff will regulate the flow of customers onto trains, but expect crowding. Please bear with us; we appreciate your understanding.

This service plan may change as conditions warrant. Please watch for new developments. For up-dates visit the MTA website, **www.mta.info** and the NYC website, **www.nyc.gov**, call the LIRR service line at 718-217-5477 or NYC at 311, or check local newspapers, radio, and television news and listen for announcements.

GENERAL RECOMMENDATIONS

- If possible, work from home or at an alternate location near your home.
- If possible, stagger your work hours to avoid travel at peak times. Avoid trains arriving at Penn Station, Jamaica, or Flatbush Ave 6-9 AM or departing 4-7 PM.
- If possible, do not drive into Manhattan. There will be vehicle occupancy restrictions at bridges and tunnels into and out of Manhattan. Carpooling sites will be set up by the City of New York. See www.nyc.gov for details.
- Some subway and bus riders may be able to use Long Island Rail Road in Queens or Metro-North Railroad in the Bronx to travel into midtown Manhattan. Remember that both services will be very crowded and that regular service will be modified. See table on back for details.
- It is unclear whether NYC Transit buses in Queens & Staten Island and MTA Bus services in the Bronx, Brooklyn, and Queens will be running. Check www.mta.info for information.
- Long Island Bus will largely operate regular service. Check www.mta.info for details. Expect crowded service and delays.
- It is unclear whether private buses in Queens and Brooklyn will be running. Check www.nyc.gov for information.
- Paratransit services will operate; expect delays in NYC; if possible limit travel to essential trips.
- Check the MTA website (www.mta.info) and the City of NY website (www.nyc.gov), or call the City of New York at 311 (outside NYC call 212-639-9675), for updates to contingency travel information.
- Call 718-217-LIRR; 516-822-LIRR or 631-231-LIRR for the most current Long Island Rail Road information.
- Check radio, television, and newspapers for updates.

LIRR SERVICE CHANGES

To provide additional service in Queens, LIRR must modify its service. For example, regularly scheduled trains will serve Queens riders from hub stations 6-9 AM and 4-7 PM. At all other times dedicated shuttle trains and/or regular trains will provide service at all stations in Queens. These services are detailed in the table on the reverse side.

- Seven regular AM peak and seven regular PM peak trains will be cancelled to provide for Queens shuttle train service. See www.mta.info for details.
- Regular LIRR customers who commute to or from Queens stations other than Jamaica may have to change trains to reach their destinations. See table on the reverse side of this brochure for details.
- LIRR commuters at Jamaica, Kew Gardens, Forest Hills, and Woodside will be served by special shuttle trains. See table on back for details.

Fare Information

- A strike fare will be charged for travel within the city at all times. For fare information visit www.mta.info, call 718-217-5477, or check local newspapers.
- **Tickets should be purchased before boarding trains. Tickets purchased on board trains will cost substantially more.**
- Purchase tickets for your round trip to save time on line.
- Regular LIRR customers can use their existing monthly or weekly tickets on shuttle train services. **Unfortunately, MetroCard cannot be accepted on LIRR trains.**
- Mail&Ride customers holding monthly tickets with Unlimited Ride MetroCard will automatically receive credit for any unused portion of the MetroCard in the next statement.
- **All other Unlimited Ride MetroCard customers will be able to resume use of the card when NYC Transit services resume.**

LIRR SERVICE CHANGES

- To ease crowding, there will be street-level queuing at Penn Station, Flatbush Ave, Jamaica, & many Queens stations.
- Watch for special signage and additional personnel who will be available to answer questions at Penn and Queens stations.
- Reverse peak service will run on a regular schedule.
- Expect delays and crowded conditions on all trains due to anticipated ridership increases and many trains with fewer cars.

Penn Station:

Purchase tickets at 34th St and 7th Av, then get on line for trains at the following entrances:

Woodside, Forest Hills, Kew Gardens, Jamaica (Central Queens) —7th Av @ 32nd St.

Eastern Queens and Hicksville, Huntington, Port Jefferson, Oyster Bay, Hempstead, West Hempstead Branches — 8th Av-33rd St subway entrance.

Northern Queens and Ronkonkoma, Port Washington Branches — 8th Av-33rd St Amtrak entrance.

Southeast Queens and Babylon, Montauk, Long Beach, Far Rockaway Branches — taxi area under Madison Square Garden, 33 St between 7 Av and 8 Av.

Jamaica Station:

Look for your service at:

Tracks 1, 2, & 3—regular westbound trains, all times.

Tracks 4 & 5—special Jamaica to Penn Station shuttle trains, all times.

Tracks 6, 7, & 8—regular eastbound trains, all times.

(over)

Long Island Rail Road Service

Reverse Peak (AM Outbound PM Inbound) will run regular service

	5 AM – 6 AM	6 AM – 9 AM 4 PM – 7 PM	9 AM – 4 PM 7 PM – 10 PM After 10 PM, Regular Service	Weekend
Eastern Queens/ Western Nassau • Bellerose • Queens Village • Hollis • Jamaica	Regular service makes all scheduled Queens stops.	Regular service bypasses Bellerose, Hollis. Queens Village Hub: 8 additional trains will stop 6-9 AM and 9 additional trains will stop 4-8 PM. Service about every 15-20 minutes.	Regular service. Shuttle train service stops at Bellerose, Queens Village, Hollis, Jamaica, Penn. Service about every 20 minutes until 10 PM, then regular service.	Regular service.
Southeast Queens/ Western Nassau • Valley Stream • Rosedale • Laurelton • Locust Manor • St. Albans • Jamaica Far Rockaway Sta: regular service all times	Regular service.	Regular service bypasses Rosedale, Locust Manor, and St. Albans. Valley Stream/Laurelton Hubs: All Far Rockaway/ Long Beach trains stop at Valley Stream and Laurelton. Service about every 15-20 minutes.	All regularly scheduled Far Rockaway/ Long Beach trains stop at Valley Stream and Laurelton; service about every 30 minutes. Regular scheduled service to Rosedale, Locust Manor, and St. Albans.	Regular service.
Northern Queens/ Western Nassau • Great Neck • Little Neck • Douglaston • Bayside • Auburndale • Broadway • Murray Hill • Flushing/Main • Shea Stadium	Regular service makes all scheduled Queens stops; no stops at Shea Stadium.	Regular service bypasses Little Neck, Douglaston, Auburndale, Broadway, Murray Hill, Flushing/ Main, Shea Stadium. Great Neck/Bayside Hub: Trains make all stops, Port Washington to Great Neck, then Bayside and Penn. Service about every 15-20 minutes.	Regular service, including stops at Shea Stadium. Shuttle train service stops at Great Neck, Little Neck, Douglaston, Bayside, Auburndale, Broadway, Murray Hill, Flushing/Main, Shea Stadium, and Penn. Service about every 15-30 minutes until 10 PM, then regular service.	Regular service, including stops at Shea Stadium. Shuttle train service at all stops Great Neck to Penn 5 AM-10 PM. Service about every 30 minutes until 10 PM, then regular service.
Central Queens • Jamaica • Kew Gardens • Forest Hills • Woodside	Regular service makes all scheduled Queens stops. Shuttle train stops at Jamaica, Kew Gardens, Forest Hills, Woodside, and Penn. Service every 20 minutes.	Regular service bypasses Jamaica, Kew Gardens, Forest Hills, Woodside Shuttle train stops at Jamaica, Kew Gardens, Forest Hills, Woodside, and Penn. Service about every 15 minutes.	Regular trains stop as capacity permits. Shuttle train stops at Jamaica, Kew Gardens, Forest Hills, Woodside, and Penn. Service about every 20 minutes until 10 PM, then regular service.	Regular and shuttle train service from 5 AM – 10 PM. Service about every 20-30 minutes until 10 PM, then regular service.
Long Island City • Jamaica • Long Island City • Hunterspoint Ave closed	Trains do not operate.	Service to Long Island City for limited connecting ferry service; about every 20 minutes. Hunterspoint Ave closed.	Shuttle train service between Long Island City and Jamaica; about every 60 minutes. Service to 9 PM (to coincide with ferry schedule). Hunterspoint Ave closed.	Trains do not operate.
Brooklyn • East New York • Nostrand Ave • Flatbush Ave	Regular service.	All trains stop at East New York, Nostrand Ave., and Flatbush Ave. with queuing.	Regular service with queuing.	Regular service.

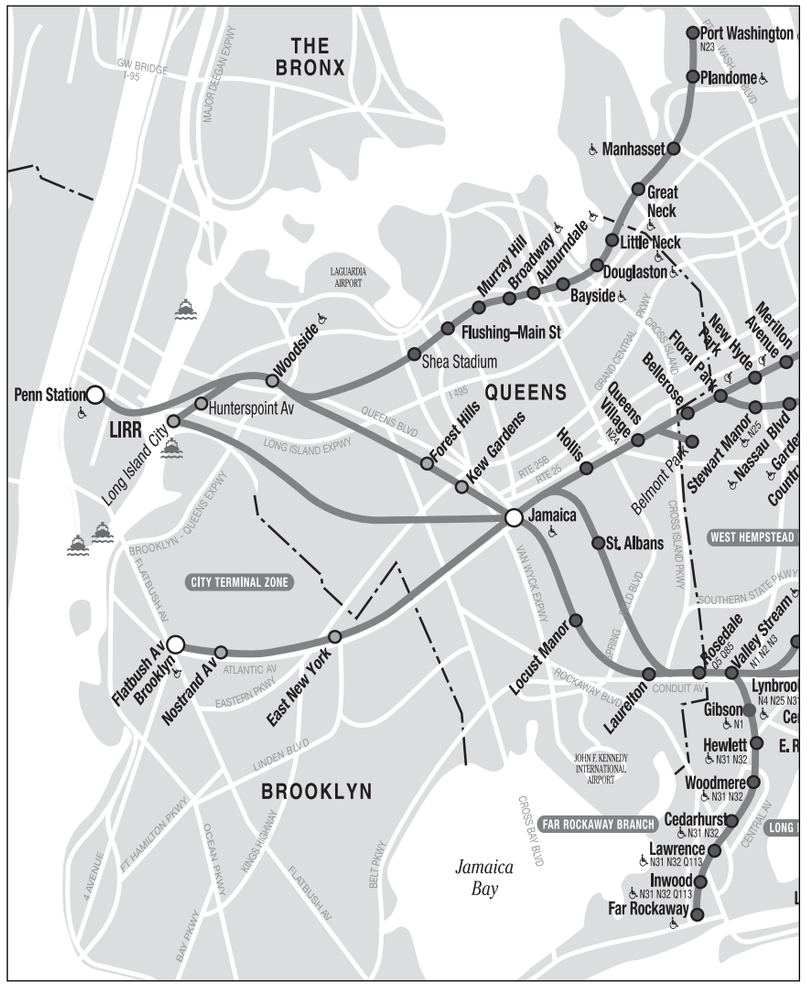
Despite indicated frequencies, expect lines, long waits, and delays. MTA staff will regulate the flow of customers onto trains, but expect crowding. Please bear with us; we appreciate your understanding.

This service plan may change as conditions warrant. Check www.mta.info for more information.

LIRR Stations referred to in table.

(Manhattan, Queens, Brooklyn, and Nassau)

Directions to stations can be found on www.mta.info.



Metro-North Railroad

New York City Transit Strike Contingency Plan

While it is illegal under New York State law for New York City Transit subway and bus employees to strike, it is possible that a strike may occur on or after December 16, when their contract expires.

In the event of a strike, Metro-North service will be affected. Travel options for subway and bus riders will be limited, and contingency services will not be in place for 24 hours after the strike begins.

Expect lines, long waits, and delays. Metro-North staff will regulate the flow of customers onto trains during peak periods, but expect crowding. Please bear with us; we appreciate your understanding.

This service plan may change as conditions warrant. For updates, visit the MTA website, **www.mta.info** and the NYC website, **www.nyc.gov**, call the MNR service line at 212-532-4900 or NYC at 311, or check local newspapers, radio, and television news and listen for announcements.

GENERAL RECOMMENDATIONS

- If possible, work from home or at an alternate location near your home.
- If possible, stagger your work hours to avoid travel at peak times. Avoid trains arriving at Grand Central Terminal between 7:30-9:30 AM or departing 4:30 PM-6:30 PM.
- If possible, do not drive into Manhattan. There will be vehicle occupancy restrictions at bridges and tunnels into and out of Manhattan. Carpooling sites will be set up by the City of New York. See www.nyc.gov for details.
- Some subway and bus riders may be able to use Metro-North Railroad in the Bronx or Long Island Rail Road in Queens to travel into midtown Manhattan. Remember that both services will be very crowded and that regular service will be modified. See table on back for details.
- It is unclear whether NYC Transit buses in Queens and Staten Island and MTA Bus services in the Bronx, Brooklyn, and Queens will be running. Check www.mta.info for information.
- It is unclear whether private buses in Queens and Brooklyn will run. Check www.nyc.gov for information.
- Paratransit services will operate. Expect delays in NYC; if possible, limit travel to essential trips.
- Check the MTA website (www.mta.info) and the City of NY website (www.nyc.gov), or call the City of New York at 311 (outside NYC call 212-639-9675).
- Call 800-METRO-INFO (800-638-7646) outside New York City or 212-532-4900 for Metro-North information.
- Check radio, television, and newspapers for updates and listen for announcements.

METRO-NORTH SERVICE CHANGES

To provide additional service in the Bronx, Metro-North Railroad must modify existing service. For example, all regularly scheduled trains will have fewer cars. Some Hudson and Harlem Line trains will skip their regular Bronx station stops. **New Haven Line trains will make all regularly scheduled stops, including Fordham.**

Dedicated shuttle trains will operate between the Bronx and Manhattan. Hudson, Harlem, and shuttle train services are detailed in the table on the reverse side of this brochure.

- Three regular Hudson Line PM peak trains will be combined to provide for Bronx shuttle service. If conditions warrant, more combinations/cancellations may be necessary. Please listen for announcements and see www.mta.info for information.
- Regular Metro-North customers who commute to or from Bronx stations may have to change trains to reach their destinations.
- To facilitate boarding, a special entrance to Grand Central on 43rd Street between Madison and Vanderbilt Avenues will be designated for Bronx shuttle train service.
- Watch for special signage and additional personnel who will be available to answer questions at New York City stations.
- Expect delays and crowded conditions on all trains due to anticipated ridership increases and many trains with fewer cars.

Fare Information

- A strike fare will be charged for travel within the city at all times. For fare information visit www.mta.info, call 212-532-4900, or check local newspapers.
- **During peak periods, tickets must be purchased before boarding trains.**
- Purchase tickets in advance to save time and money. **Tickets purchased on board trains will cost substantially more.**
- Regular Metro-North customers can use any existing Metro-North ticket on shuttle train services. **Unfortunately, MetroCard cannot be accepted on MNR trains.**
- Mail&Ride customers holding monthly tickets with Unlimited Ride MetroCard will automatically receive credit for any unused portion of the MetroCard in the next statement.
- **All other Unlimited Ride MetroCard customers will be able to resume use of the card when NYC Transit services resume.**

METRO-NORTH SERVICE CHANGES

Shuttle Train Service:

- **West Bronx Shuttle** (Hudson Line) will serve Morris Heights, University Heights, Marble Hill, and Spuyten Duyvil at all times. West Bronx Shuttle will also serve Riverdale in the PM peak, off-peak, and on weekends.
- **East Bronx Shuttle** (Harlem Line) will serve Melrose, Tremont, Fordham, Botanical Garden, Williams Bridge, Woodlawn, Wakefield, and Mount Vernon West. However, during peak hours, shuttle will not stop at Melrose (use temporary station at Yankee Stadium) or Tremont (use Fordham).
- **Yankee Stadium Shuttle** will serve a temporary Yankee Stadium Park-&-Ride facility. Trains will operate between Yankee Stadium, Harlem-125th Street, and Grand Central Terminal.

Metro-North Railroad Service

	Peak Service 5–11 AM: Inbound 3:30–8:30 PM: Outbound	Off-Peak Service 11 AM–3:30 PM	Off-Peak Service 8:30 PM until last train	Reverse-Peak Service 5–11 AM: Outbound 3:30–8:30 PM: Inbound	Weekend Service
Hudson Line (West Bronx) • Riverdale • Spuyten Duyvil • Marble Hill • University Heights • Morris Heights • Harlem-125 St • Grand Central Terminal	Regular scheduled AM service stops at all Bronx stations. AM shuttle train service stops at Spuyten Duyvil, Marble Hill, University Heights, Morris Heights, Harlem-125 St, and GCT. PM outbound regular service bypasses all Bronx stations. Use shuttle train service for all Bronx stations. AM/PM service every 15-25 minutes.	Regular scheduled service stops at all Bronx stations. Shuttle train service makes all stops to/from Riverdale, Spuyten Duyvil, Marble Hill, University Heights, Morris Heights, Harlem-125 St, GCT. Combined service every 30 minutes.	Regular scheduled service stops at all Bronx stations. Shuttle train service makes all stops to/from Riverdale, Spuyten Duyvil, Marble Hill, University Heights, Morris Heights, Harlem-125 St, GCT. Combined service every 30 minutes until 11:20 PM; thereafter only regular service until last train leaves GCT at 1:50 AM.	Regular service.	Regular scheduled service stops at all Bronx stations. Shuttle train service makes all stops to/from Riverdale, Spuyten Duyvil, Marble Hill, University Heights, Morris Heights, Harlem-125 St, GCT. Combined service every 30 minutes 7 AM-10:20 PM; thereafter only regular service until last train leaves GCT at 1:50 AM.
Harlem Line (East Bronx) • Mt. Vernon West • Wakefield • Woodlawn • Williams Bridge • Botanical Garden • Fordham • Tremont • Melrose • Harlem-125 St • Grand Central Terminal	Regular service bypasses all Bronx stations. Shuttle train service to/from Mt. Vernon West, Wakefield, Woodlawn, Williams Bridge, Botanical Garden, Fordham, Harlem-125 Street, and GCT. Shuttle bypasses Melrose (use termporary station at Yankee Stadium) and Tremont (use Fordham). Shuttle service every 15-25 minutes.	Regular scheduled service stops at all Bronx stations. Shuttle train service to/from Mount Vernon West, Wakefield, Woodlawn, Williams Bridge, Botanical Garden, Fordham, Tremont, Melrose, Harlem-125 St, GCT. Combined service every 30 minutes.	Regular scheduled service stops at all Bronx stations. Shuttle train service to/from Mount Vernon West, Wakefield, Woodlawn, Williams Bridge, Botanical Garden, Fordham, Tremont, Melrose, Harlem-125 St, GCT. Combined service every 30 minutes until 11:20 PM; thereafter only regular service until last train leaves GCT at 1:53 AM.	Regular service bypasses all Bronx stations. Shuttle train service to/from GCT, Harlem-125 St, Fordham, Botanical Garden, Williams Bridge, Woodlawn, Wakefield, and Mt. Vernon West. Bypasses Melrose (use Yankee Stadium) and Tremont (use Fordham). Shuttle service every 15-30 minutes.	Regular scheduled service stops at all Bronx stations. Shuttle train service to/from Mount Vernon West, Wakefield, Woodlawn, Williams Bridge, Botanical Garden, Fordham, Tremont, Melrose, Harlem-125 St, GCT. Combined service every 30 minutes 7 AM-10:20 PM; thereafter only regular service until last train leaves GCT at 1:53 AM.
Temporary service at Yankee Stadium	Yankee Stadium shuttle train service to/fromYankee Stadium temporary Park-&-Ride, Harlem-125 St, and GCT. Service every 30-40 minutes in peak direction only.	Service every 60 minutes in both directions.	Outbound service every 60 minutes through 11:50 PM.	No service.	Service every 60 minutes in both directions. First train leaves Yankee Stadium at 7 AM and GCT at 7:30 AM. Last train leaves Stadium at 10 PM and GCT at 10:30 PM.

Despite indicated frequencies, expect lines, long waits, and delays. MTA staff and police will regulate the flow of customers onto trains during peak periods, but expect crowding. Please bear with us; we appreciate your understanding.

This service plan may change as conditions warrant. Check www.mta.info for more information.

Metro-North Stations referred to in table.
(Manhattan, Bronx, and lower Westchester)

Directions to stations can be found on www.mta.info.