

Metropolitan Transportation Since September 11

A media source-book

— Tri-State Transportation Campaign, September 3, 2002 —

How has the metropolitan transportation network changed and adapted ?

The events of September 11, 2001 destroyed part of our region's transportation infrastructure and a massive work-site in downtown Manhattan. It also caused many other jobs to leave downtown. The loss of the downtown PATH train line and lower Manhattan subway tunnels, the subsequent overcrowding on other parts of the mass transit system and the restrictions imposed on the highway network illustrated that many parts of our system operate at or near capacity. That may have implications for future planning and investment.

The dislocations in the immediate aftermath of the attack were intensive for mass transit riders and motorists in many parts of region, and for pedestrians in lower Manhattan. Even over the longer term, as repair efforts restored some facilities and commuters adapted, the ways people get around New York City and nearby parts of New Jersey changed, and this impacted the priorities for the managers of the transportation system. Some impacts and changes may persist over the long-term.

This document presents a basic overview of the major transportation system changes and trends since September 11, organized in the following sections:

- 1. What was lost or disrupted**
- 2. Mass transit ridership: regional trends**
- 3. The Manhattan carpool rule: changing the way we drive**
- 4. The street environment downtown**
- 5. Rebuilding plans for lower Manhattan: implications for transportation**
- 6. Intercity travel in the Northeast**

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What the transportation system lost

The collapse of the World Trade Center towers destroyed the PATH train's World Trade Center station and the eastern end of the PATH tunnel. That is one of only two PATH tunnels providing rapid transit connections between Manhattan and New Jersey cities in Hudson and Essex Counties. The buildings' collapse also wrecked the lower 1/9 subway tunnel, ending service on that line below Chambers Street until the present (reports suggest the line will reopen Sept. 15). The World Trade Center terminal of the E subway line was also destroyed and remains closed. The Cortland Street station on the N/R subway also remains closed, although subway trains run through the station — service on that line was restored near the end of October.

West Street and smaller streets in the vicinity of the World Trade Center had their surfaces destroyed, buried or blocked. That loss of street capacity, and the immediate need to move in large amounts of recovery and construction equipment led to a virtual traffic ban below 14th Street, which was later shifted to Canal Street and then lifted in stages as streets reopened to encompass only the immediate World Trade Center area.

The need to keep traffic away from the crippled street network downtown led to bans on private motor vehicle access to the Brooklyn Battery and Holland Tunnels until October. Ferry landings west of the World Trade Center site had to be shifted to the tip of Manhattan and to Pier 11 on the East Side. Additionally, the city's airports were closed for much of the remainder of September.

Mass transit system impacts

New Jersey Most Heavily Affected

The heaviest mass transit impacts in the region were felt in New Jersey. Indeed, the crisis starkly outlined the strong symbiosis between the lower Manhattan job market and residential communities in northern New Jersey. While ferries from the Hudson County shoreline have been able to fill in for some of the lost transit capacity, loss of the downtown PATH line has caused severe over-crowding on the 33rd Street PATH line and New Jersey Transit commuter trains.

- 70,000 riders used the World Trade Center PATH station daily before it was destroyed.
- Many have shifted to the 33rd Street PATH service connecting to subways. Ridership doubled on the 33rd Street PATH service in the months after the attack, from 37,000 to 50,000 weekday riders. The influx of riders to 33rd Street line stations has caused the Port Authority to cancel morning eastbound outbound service at several of them, and to plan for construction of higher capacity entrances and exits at the two Greenwich Village stations.
- 10,000 other riders shifted to NJ Transit lines running into Penn Station New York. Ridership on the lines increased 45% in the first month after the attacks.
- As of August, 2002, NJ Transit ridership into Penn Station NY is still 19% higher than at this time last year. At the same time, the slowing economy has caused NJ Transit's overall ridership to dip 5.8% in the last year.

- The crowding on NJ Transit trains serving Penn Station has led the agency to add service and lengthen trains, though some crowding remains. Penn Station will remain under heavy pressure for some time because long-awaited projects designed to give more of NJ Transit train riders direct access to Manhattan continue to come on line. Some of the trains added to the Northeast Corridor and Morris and Essex lines may have to be removed when the Montclair Connection opens this fall (it will give Boonton Line trains direct access to Penn Station).
- NJ Transit now says it must delay the opening of its new Secaucus Transfer station until the downtown PATH line re-opens. The Secaucus station is designed to give NJ Transit's entire network either direct access to Penn Station or access with an across-platform transfer. But the capacity to move additional passengers into Penn Station has been used up by the post-9/11 surge in riders.

Ferries from the Hudson County waterfront were also able to serve some of the commuters stranded by the PATH's destruction.

- After the attacks, weekday ridership on cross-Hudson ferries grew from 30,000 to 65,000 riders and remains at that level.
- The Federal Emergency Management Administration provided \$11.8 million to the Port Authority to operate emergency commuter ferry service between Manhattan and New Jersey and \$2.3 million to the NYC Department of Transportation for the implementation of a ferry service between Manhattan and Brooklyn. Some of the federally supported New Jersey routes failed to attract a significant number of riders. Ridership on the Brooklyn ferry, which was expected to level off or decline after the N/R subway service was restored, has maintained a steady ridership base.
- NY Waterway counted only 780 more riders on May 1, after FEMA-supported service expansions, than the 20,103 it carried March 20. The number of commuters on round-trip ferries from Hoboken Terminal, where federal money paid for service expansions, was up only by about 1,000 a month after the expansion.

As jobs relocated from the World Trade Center area to other locations, the resources of reverse commute services were tested. Ridership on the Hudson-Bergen Light Rail doubled in the days after the attacks as commuters traveled to new job locations at Exchange Place in Jersey City and destinations further south along the light rail route. However, many intra-New Jersey commuters appear to have used the service only during the three months that fares were waived.

- The Hudson-Bergen Light Rail line opened April 15, 2001
- Daily ridership averaged 8,000 in the months prior to September 11.

- Light rail fares were waived between September 11 and November 1, 2001.
- Ridership jumped to 20,000 riders in the weeks after September 11.
- Average daily ridership has remained over 11,000 since February.

Other Transit Trends

Commuter rail lines in suburban New York and Connecticut have seen slight declines in weekday ridership over the past year due to a weakening economy. New York City Transit subways and buses have fully recovered from lower demand last fall, and in fact have more weekday riders than a year ago. More people appear to be relying on Metro-North and Long Island Railroads for vacations and occasional trips – off-peak and weekend ridership has increased on both railroads this year.

Metro North Railroad

Total ridership down 1.4%
 Rush hour ridership down 3.5 %
 Off-peak and weekend travel up 2.7 %

Long Island Railroad

Total ridership down 2.6%
 Rush hour ridership down 5.8%
 Off-peak and weekend travel up 3.4%

NYC Transit

As of July, average weekday ridership on subways unchanged (4.6 million) from a year ago.
 Average weekday ridership on buses is slightly higher (was 2.4 million last year and is edging up to 2.5 million this year)

Free service on the Brooklyn Ferry, which runs from the Brooklyn Army Terminal to downtown Whitehall terminal, was established September 17, 2001. The service was turned over by NYC DOT to private operation by NY Waterway June 24, 2002. Although ridership was expected to dip when N and R subway service was restored in late October, the ferry continues to serve a dedicated ridership base of over 1,800 passengers.

- The free Brooklyn Ferry transported an average of 1,500 passengers when the N and R subway lines were not serving downtown last fall.
- As of August, 2002, ridership on the Brooklyn Ferry remained at 1,800-1,900 passengers daily.

Shifting Workplace Destinations

The World Trade Center no longer serves as a destination for 100,000 workers and thousands more daily visitors. Despite widespread concern last fall that the September 11 attacks would create an exodus of jobs from the city to suburban office parks, reports and news stories estimate that the majority of jobs that have relocated have done so within Manhattan, with between 4-8% moving to new space downtown, 50-65% in newly established or expanded offices in Midtown.

- The large remainder of employers have chosen to settle workforces in transit-connected areas of New Jersey over the more auto-dependent Connecticut and New York metro suburbs.
- Many jobs that have relocated outside of Manhattan have gone to Jersey City, Newark and northern New Jersey counties along the North-East Corridor or Morris and Essex NJ Transit lines. Of these companies, many are expected to move jobs back to Manhattan.

The Manhattan Carpool Rule: Changing the Way We Drive

One of the most significant transportation policy decisions made after September 11 was the implementation of the Manhattan carpool, or single occupancy vehicle, rule. Although much attention was paid to the inconvenience the carpool rule would cause, solo drivers actually made up a small percentage of commuters entering Manhattan before the rule was put into place.

Overview of the Carpool Rule

- The carpool rule required two passengers or more all crossings into Manhattan below 62nd Street from September 2001 – April 2002.
- The rule was established by NYC Mayors Rudolph Giuliani and Michael Bloomberg through emergency executive orders. Mayor Bloomberg continues to issue executive orders that maintain the carpool rule for downtown Manhattan crossings.
- Mayor Bloomberg suspended the rule for three midtown Manhattan crossings (the Queens-Midtown and Lincoln Tunnels and the Queensboro Bridge) on April 22. Bloomberg recently said the carpool rule will stay in effect on downtown crossings “for the foreseeable future.”
- **A small number of commuters use single occupancy vehicles** - between 6 a.m. and 11 a.m., 3.3% of all commuters entering Manhattan (by trains, buses, cars, etc.) on bridges and tunnels south of 63rd Street were in single occupant vehicles.
- **Single occupancy vehicles account for most traffic congestion** - between 6 a.m. and 11 a.m., 53% of all vehicles (commercial or private) entering Manhattan south of 63rd Street were single occupant vehicles.

The Carpool Rule: Easing Traffic

Both anecdotal and empirical evidence has shown that the carpool rule eased traffic on the city's crowded crossings.

- Between September and November, the average number of people per car on crossings governed by the carpool rule increased from 1.57 to 1.87.
- The carpool rule eliminated 11,000 vehicles during rush hour on the affected crossings from September to November.

The Carpool Rule: Disappointment in Midtown

When the city removed the rule on three midtown Manhattan crossings, many drivers and bus riders expressed frustration as traffic returned.

- Rush hour traffic in the Lincoln Tunnel was up 17% on the morning that the carpool rule was eliminated — around 3,000 more cars than the average when the carpool rule was in force.
- Traffic volumes at the Lincoln Tunnel for July were only 2.2% lower than last year's level.
- The 13.3% decline in traffic experienced on the Holland Tunnel in April dropped to 6% in July.
- Midtown Manhattan's Community Board 5 is in the process of passing a resolution that calls for legislation to create a permanent carpool rule.

Carpool and Express Bus Lanes

Although Mayor Michael Bloomberg has abandoned the idea of relying on a permanent carpool rule to control traffic, the experience has opened the door for other traffic management strategies. Emergency conditions soon after the attacks created rapid bus-only corridors on both sides of the river.

Lincoln Tunnel

- The Port Authority extended the operating hours of its Lincoln Tunnel bus-only lane one-half hour earlier, from 5:45 to 10 am.
- The Port Authority has expressed interest in using another lane on the Lincoln Tunnel for buses only, or a combination of buses and carpools.

Gowanus Expressway HOV Lane

- NYC Transit express buses shared an exclusive right-of-way with emergency vehicles in one eastbound lane from the beginning of the Staten Island Expressway at the Goethals Bridge over the Verrazano Bridge, along the Gowanus Expressway HOV lane, through the Brooklyn-Battery Tunnel and up the FDR Drive to Houston Street.

- The city raised the vehicle occupancy requirement from two to three passengers on the Gowanus Expressway's high-occupancy vehicle lane (HOV lane) in April.
- Staten Island bus drivers report that speeds are up in the lane and commutes are much faster from 6-10am, when the restriction is in effect.

Church Street Busway

- On September 3, the New York City Dept. of Transportation opened a downtown bus-only corridor along Church Street.
- The Trinity Street exit from the Brooklyn-Battery Tunnel will be closed to private vehicles, which will either use the West Street or the FDR.
- The city DOT estimates that the busway will shave 10-15 minutes off of travel times for express bus riders.
- NYC Mayor Michael Bloomberg called the busway a pilot transportation improvement project, indicating that other busways would be considered if this one is successful.

The Street Environment Downtown

After the attacks, downtown streets were filled with pedestrians finding new routes from different transit points to their destinations. Street closures created pedestrian-only access south of Canal Street, until vehicles returned in the months after September 11. However, many blocks remain closed as utilities tear up streets to lay new cable, wire and pipe. Although a majority of the streets south of Canal were repaved, many continue to be torn up for utility work.

Street redesign

- Almost 100 miles of streets are being redesigned from curb to curb.
- Over the next three years their sidewalks will be expanded dramatically, street parking severely reduced and traffic calming measures like neck-downs built.
- NYCDOT engineers are drafting plans to widen most sidewalks except where it affects turning vehicles.

Pedestrian bridges

- West Street is the main pedestrian obstacle for walkers between downtown and Battery Park City.
- The Liberty Street pedestrian bridge reopened early this year reconnecting the World Financial Center on West Street to Church Street.
- In April a pedestrian bridge opened at Rector Street over West Street.

Pedestrian Malls

- Before Sept. 11 there were three pedestrian malls in lower Manhattan: Wall, Fulton and Nassau streets.
- Now almost 12 are pedestrian malls, with plans under discussion to extend a continuous north/south pedestrian mall from City Hall to Battery Park. Retractable bollards block these streets, allowing only pedestrian and utility and emergency vehicle access.

Rebuilding Plans for Lower Manhattan: Implications for Transportation

The rebuilding process for lower Manhattan, involving regional agencies, politicians and citizens, includes transportation projects that affect downtown as well as the region as a whole. Support from the Federal Emergency Management Agency will combine with other federal funds to not only replace what was destroyed, but to create a transportation infrastructure to serve as the base for downtown revitalization.

Federal Funding

- New York City has received \$6.3 billion in federal aid to rebuild its transportation infrastructure.
- FEMA will allow unprecedented flexibility in the \$4.55 billion it has made available for transportation projects. Therefore, the funding can be used to make improvements on the city's transportation network rather than simply replacing what was destroyed.

Lower Manhattan Development Corporation Proposals

The LMDC has included several transportation projects in its "Blueprint for the Future of Lower Manhattan." While many of the projects, such as the construction of a downtown transit hub, will likely receive wide support, others are more controversial.

- **Downtown Transit Hub (estimated cost \$2 billion):** A proposed downtown transit hub would link a rebuilt downtown PATH station to downtown subway lines in a facility far more pleasing and negotiable than today's Fulton Street complex. Officials say the hub could be in operation by as early as 2005.
- **Modernization of the South Ferry 1/9 Station (estimated cost \$400 million):** While service will resume at the 1/9 South Ferry Station on September 15, the outdated platform does not accommodate modern ten-car trains. The station's modernization would coincide with rebuilding work on the lower end of the line and renovation of the Whitehall Ferry Terminal.
- **Downtown Bus Terminal:** A bus terminal near the World Trade Center site would provide relief from the haphazard practice of parking out-of-service buses wherever they can find space. The Terminal would free up street space, improving traffic flow.

- **Second Avenue Subway Construction:** Pressure from elected officials led the LMDC to add the Second Avenue Subway project to its final blueprint. The subway, which would fill in a transportation gap on Manhattan's east side, would also relieve pressure from the crowded Lexington Avenue trains.
- **Downtown Extension of Commuter Rail (estimated cost for study \$250 million):** Recent indications are that federal money could be spent to study a plan to bring Long Island and/or Metro-North Railroads to downtown Manhattan. An MTA study was conducted during the late 1990s, but the project was essentially deemed redundant when momentum gathered in favor of the Second Avenue subway. A plan the MTA did not look at was dispossessing a subway line and using its East River tunnel for the LIRR. That will likely be included in the new study, but it's hard to imagine that any cost-benefit calculation could favor diminished subway access between Brooklyn and Manhattan.
- **Burying of West Street (estimated cost \$2 billion):** Several variations for burying West Street to create a promenade and park space have been proposed, which differ in cost depending on the length of roadway that would be buried. Officials recently suggested that part of the cost of the project could be funded with private money, or that the project could be scaled down to reduce its cost. The main concern about burying the roadway is that its high cost will detract from other, more pressing, transportation needs.

Intercity Travel in the Northeast

Fear of flying and airport delays combined to shift business and recreational travelers to inter-city Amtrak trains, accelerating a recent trend in ridership gains. At the same time, Amtrak faced a looming deadline for operational self-sufficiency, which was imposed by federal legislation in 1997. Recently, derailments and cracks in high-speed Acela locomotives have caused service disruptions and have likely significantly impacted ridership gains.

- Amtrak's high-speed Acela trains helped it capture 52% of the NYC-Washington combined air and rail market in the last quarter of 2001.
- Soon after the attacks, Amtrak's system-wide ridership was 15% higher than the previous year, and Acela Express ridership was 35% higher.
- During the six month period from October 1 to March 31, 2002, ridership was up by over 300,000 passengers on trains in the Northeast and West Coast.
- 60% of flights in North America are 400 miles or less, the perfect distance for rail travel.
- In the face of a shutdown in July, Congress approved a \$205 million appropriation to keep Amtrak running through the end of September.
- Amtrak has requested, but not received, \$1.2 billion in funding for fiscal year 2003.