

# Congestion Management in New York City: Managing Why People Drive

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The solution to Manhattan's congestion management problem of increasing traffic congestion, increasing air pollution, and decreasing transit ridership requires comprehensive actions to modify regional travel behavior. To this end, a cooperative interagency research effort was conducted using focus groups to solicit the attitudes of automobile users. That effort and the process of which it was a part are presented here. To maximize efforts related to Manhattan's congestion management problem, the Manhattan Central Business District (CBD) Access Group—composed of transportation, environmental, and planning agencies serving the New York City region—was convened. In its behalf, *The Manhattan Auto Use Decision Study* was conducted to identify the reasons travelers use automobiles rather than transit for CBD travel and to solicit suggestions and reactions to proposals for shifting travelers from cars to transit. The insights into travel behavior and market attitudes provide information for developing strategies to reduce vehicular congestion, improve air quality, and increase transit ridership. The study found that automobile travelers have a dichotomy of views about automobile use; commuters are making logical choices; cost may be dominant, but subtle, in influencing mode choice; and a "carrot and stick" may be needed to divert automobile users to transit. Many of the project's findings have been accepted and acted upon, underscoring the validity of the study's results and the relevance of the focus group methodology.

The search for congestion management solutions has become a national phenomenon. Increasingly, suburban congestion, innovative transportation management ordinances, and gridlock alert days find their way into the local and national media. In early 1987 New York City embarked on a regional effort to address its own congestion problem. As part of that effort, focus groups were conducted to identify pertinent issues and to introduce transportation user perspectives to the early stages of the planning process. The following review of that process provides both insight to the problem and a case study on the use of focus groups.

## NEW YORK CITY'S CONGESTION MANAGEMENT PROBLEM

The solution to the congestion management problem of increasing traffic congestion paralleled by increasing air pollution and decreasing transit ridership requires modifying regional travel behavior. Comprehensive responses are needed so that the results are socially acceptable.

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First, it is necessary to define the terms. The New York City congestion management problem has been defined primarily as relating to access to and movement within the Manhattan Central Business District (CBD)—that is, that portion of Manhattan south of 60th Street. The CBD is unique in that its 8.4 square miles contains the highest concentration of business and commercial enterprises in the United States, employing approximately 25 percent of the region's work force (1).

On a typical fall business day in 1985, about 3,350,000 persons entered the CBD using a wide variety of mass transit and arterial facilities during a 24-hour period. The utilization of modes by CBD travelers was as follows:

Mode	Persons entering Manhattan	
	Number	Percent
Automobile, taxi, or truck	1,149,947	34.4
Public transportation		
Rapid transit	1,640,732	49.1
Suburban rail	218,692	6.5
Ferry or tramway	37,947	1.1
Express bus	201,220	6.0
Local bus	96,127	2.9
Total, public transportation	2,194,718	65.6
Total, all modes	3,344,665	100.0

Nearly two-thirds (65.6 percent) of all daily entrants arrived in the CBD by mass transportation, despite a decline in subway ridership during the first part of this decade. The automobile congestion problem was generated by the remaining 1,149,947 persons, who entered the CBD by automobile, taxi, or truck (1). Metropolitan Transportation Authority (MTA) analysis indicated that not quite two out of every three automobile travelers (63.9 percent or 735,970 persons) entered the CBD from other parts of New York City, with the remainder coming from New Jersey, Long Island, and the northern suburbs.

## A COMMON NEED TO UNDERSTAND THE AUTOMOBILE USER'S PERSPECTIVE

In order to contribute to the resolution of the congestion management problem, a cooperative market research effort was conducted to identify the underlying reasons why automobile travelers drive instead of using public transit and to solicit their suggestions and reactions to proposals for shifting travelers from their cars to public transit. The study, entitled *The Manhattan Auto Use Decision Study*, was brought about by a convergence of views among 11 agencies represented in the CBD Access Group. Organized to focus on the New York City congestion management problem, the CBD Access Group

provided the forum in which the differing views of the major players—that is, New York City, the MTA, and the Port Authority of New York and New Jersey (PANYNJ)—coalesced. However, it was the effects of congestion on air quality that brought the issue to a head.

The environmental dimension originally was raised by the Clean Air Act of 1970. The act set uniform national ambient air quality standards, established an attainment deadline for meeting those air quality standards, required federal approval of state implementation plans (SIPs), established motor vehicle emission standards, and outlined broad citizen participation requirements (2). Although it has been amended, the act's basic standards require New York City and other cities to implement strategies to reduce ozone, carbon monoxide, and other air pollutants that darken their skies and threaten human health. Although industrial emissions account for some pollutants, the Environmental Protection Agency (EPA) notes that in New York, motor vehicles are by far the primary source of carbon monoxide and lead and a significant source of nitrogen oxides, ozone-forming hydrocarbons, and particulates (3).

Subsequently delayed, the applicable deadline for compliance was December 31, 1987. Penalties arising from noncompliance jeopardized receipt of \$800 million in federal funds for highway and antipollution projects in the New York City metropolitan area. Accordingly, the act was a major motivator for attempts to resolve the automobile congestion, air pollution, and transit ridership problem.

Partially in response to the act's pending pollution control deadline, the New York City Department of Transportation (NYCDOT) Commissioner Ross Sandler issued a report to the mayor entitled "An Approach to Reducing Vehicle Congestion in New York City." This report (of September 1986) stated that unless new programs were initiated, vehicular congestion in New York City would deteriorate. Accordingly, the report discussed the problem of arterial congestion in New York City, the need to reduce it in the short term, a menu of possible measures for attaining such a reduction, and the need to take action before the federally mandated Clean Air Act compliance date.

The report attributed the automobile congestion problem to an increase in the percentage of persons entering the Manhattan CBD by automobile. The market share of CBD entries captured by automobile, taxi, and truck increased from 18 percent in 1948 to 34 percent in 1984. This represents an 83 percent increase in vehicular passengers, from 657,000 persons to 1,112,000 persons, despite an 11 percent decline in total daily CBD entries from 3,691,000 persons to 3,274,000 during the same period. The number of vehicles entering the CBD nearly doubled, from approximately 388,000 to 734,000 vehicles, between 1948 and 1984. In contrast, total transit ridership into the Manhattan CBD declined by 24 percent during the same period, according to the New York Metropolitan Transportation Council (NYMTC) (1). Interestingly, had the 1948 modal split remained constant until today, 349,000 fewer vehicles would be entering the CBD, and the subway would have 504,000 more riders daily. The report went on to project that the unprecedented levels of automobile travel experienced during the 1980 transit strike could become a daily occurrence by 1990 (4).

The report assumed that strategies to reverse the traffic situation should be based on continued enforcement of traffic parking regulations and implementation of the MTA's capital

program, as "improved, attractive, reliable public transportation will better compete with the auto" (4).

The report was a call to action, not endorsing a specific "menu" of measures but endorsing the process of continued analysis, public hearings, and responsive decision making (4). The recommended approach was to reduce vehicles in motion in Manhattan, downtown Brooklyn, and Long Island City. Actions suggested for consideration included banning cars (during a part of the day in a section of the CBD), instituting congestion pricing, restricting single-occupant cars, restricting entries by license plate, placing tolls on free East River crossings, establishing more transitways to speed buses and taxis, restricting vehicles that stay in motion, and reducing the automobile commuter tax-free fringe benefit. Other measures discussed included enforcing laws more strictly, constructing peripheral park-and-ride sites, and requiring alternate fuels for taxis, buses, and other fleet vehicles. Not only did NYCDOT want solutions to the automobile congestion problem but also assistance in getting them. Accordingly, the significance of the report went beyond what was said to include the development of the planning process that continues.

In response to the city report, a coalition of leading businesses, business organizations, labor unions, and civic and community groups was formed (5). Entitled the Coalition for Improved Transportation and Air Quality, this group contributed to the dialogue between the business community and the city on this issue.

As another follow-up to the NYCDOT report, a group of 11 agencies, including MTA and the Port Authority, was convened in October 1986. The host was NYMTC, the federally designated Metropolitan Planning Organization (MPO). Entitled the CBD Access Group, the group's objective was to better define the specific problem and proposed solutions relating to New York City congestion. The CBD Access Group provided the forum in which the interests of New York City, MTA, and the Port Authority coalesced to form a cooperative planning effort. A work program was devised to develop information quickly by using existing research and resources to the extent possible. Regular meetings were held to divide responsibilities among members, report on work progress, and coordinate efforts.

This paper examines one element of that work program—*The Manhattan Auto Use Decision Study*—its findings, the events that brought about the overall cooperative effort that spawned it, and discusses how the project's findings have reinforced and influenced subsequent efforts. Sponsored by the MTA, developed with the Port Authority, and funded by the UMTA, the project was executed with the assistance of the Decision Research Corporation, a market research firm.

First a few words about the MTA. Every weekday morning, public transportation gets 83 percent of the members of the work force to their jobs in the Manhattan CBD (6). The MTA, which has jurisdiction over the New York City Transit Authority, Long Island Rail Road, and Metro-North Commuter Railroad, carries most of those people. As it entered the 1980s, the mass transit network chronically received less than 30 percent of the capital needed to keep it running. By 1980 the system was in a state of desperate disrepair (6). However, in 1981 the New York State Legislature declared a "transportation emergency" and approved the MTA's first 5-year capital program, funded at \$8.5 billion, to rebuild mass transportation for the metropolitan economy (6).

In September 1985, to establish its case for the continued availability of capital funds, the MTA conceived its 3-year Strategic Planning Initiative (SPI) (7). One of the first SPI efforts was an analysis of the performance of the subway system and the potential impact of the Capital Program (8). In 1986, based on this analysis, the MTA established goals to increase ridership by 1992—15 percent on the subway system and 10 percent on the regional transportation system as a whole. By restoring the system to a state of good repair, ridership became the principal parameter of system performance.

In that regard, MTA was interested in helping the city address its congestion management problem. By assisting New York City in getting people out of cars and onto transit, an important contribution to realizing MTA's ridership goals would be made.

MTA was not the only agency concerned about its role in helping the region meet its future travel needs. In 1984 PANYNJ linked surging trans-Hudson travel demand, marked by longer delays at vehicular crossings and overcrowding on some Port Authority Trans-Hudson (PATH) routes, to an increasingly integrated regional economy. PANYNJ noted that these regional economic growth trends could continue if expansion of transportation services could outpace worsening rush-hour congestion and crowding. Improving mass transportation was the only workable strategy for meeting the projected growth in the trans-Hudson commuter market (9). Accordingly, the Port Authority offered a plan for coordinated improvements in trans-Hudson mass transportation on a bistate basis. It proposed and identified new projects and expanded services with the potential to handle an additional 50,000 peak-period commuters via transit, costing in excess of \$900 million in new investments (9). Several improvements in trans-Hudson capacity were initiated—expanding PATH stations for longer trains, instituting new ferry service between Hoboken and the World Financial Center, planning New Jersey Transit projects that would bring more commuter rail passengers directly into Penn Station, and developing a second high-occupancy vehicle lane at its Lincoln Tunnel to help accommodate the 5,000 daily buses. From this work the Port Authority knew firsthand the importance of maintaining a balanced transportation system and its role in supporting the economic vitality of the region.

To maximize the effectiveness of New York City, MTA, and Port Authority efforts, a common understanding of the automobile user's perspective should be reflected in strategies to reduce automobile congestion, improve air quality, and increase transit ridership. To that end, *The Manhattan Auto Use Decision Study* was undertaken.

## FOCUS GROUP METHODOLOGY

The CBD Access Group designed a qualitative market research methodology based on the use of focus groups. This methodology enabled the concerned agencies to get a better understanding of the reasons underlying automobile traveler behavior without formal and time-consuming traditional citizen participation mechanisms. One hundred and seventy-one commuters and daytime travelers who use automobiles to get to or about Manhattan spoke about their automobile use decisions in a series of 18 roundtable discussions. The study included

two groups of Manhattan CBD commuters from each of seven geographic market areas east of the Hudson River—northern counties, the Bronx, Manhattan, Queens, Brooklyn, Long Island, and Staten Island—and four groups of midday Manhattan CBD travelers. Counties west of the Hudson were not included since they had been considered in previous research by the Port Authority. The majority of participants were selected from respondents to NYCDOT's East River Crossings Survey. The survey listing was supplemented by the consultant's appropriate directories. Prospective participants were screened using a brief telephone survey. Having met the criteria, interviewees were offered a \$50 stipend to participate in a 2-hour group discussion on transportation issues.

Led by the focus group moderator, participants discussed their travel options, as well as how and why they chose to travel by automobile. Also, they discussed their views on the personal and societal impacts of their modal choice and the equity, efficacy, and potential effects of suggested incentives and disincentives for motivating them and their fellow automobile travelers to switch to public transit.

In interpreting the responses of participants, it is important to keep in mind that the results of focus groups cannot be projected and thus do not produce quantitative information to predict responses of the market at large. However, focus groups do allow transportation planners to become "smart" quickly about the types of issues and reactions that may arise as a result of implementing given proposals. Most important, focus groups uncover the public's real-world perception of existing conditions, potential changes, and their probable impacts. The groups allow for an analysis of the decision process leading to participants' behavior. Focus groups are valuable for identifying and describing market segments in terms of their attitudinal and behavioral characteristics. These market segment profiles provide the basic framework for developing the subsequent quantitative research needed to measure the relative size and distribution of the market segments.

## FINDINGS AND IMPLICATIONS

### The Automobile Problem

The problems associated with Manhattan automobile congestion and poor air quality were presented to participants for their consideration. Participants discussed their perceptions of these problems, offered solutions, and speculated on the probable regional and personal impacts of these and moderator-provided solutions.

Participants were consistent in their view that automobile congestion and air pollution have eased during recent years and in their belief that they are not the primary cause of either problem. For example, the Manhattan taxi commuter blamed the non-Manhattan driver, the suburban driver blamed the city driver, and the automobile traveler from the non-Manhattan boroughs blamed the taxis and buses. In addition, automobile commuters did not see themselves as part of the midtown congestion problem. They argued that city streets are relatively clear in the morning when commuters drive from the highway directly to their parking lot. They described midtown congestion as a midday problem caused by taxis and trucks or by noncom-

muters who double-park and circle the block looking for their destination or a parking space.

Further, participants often expressed a belief that automobiles are not the primary cause of urban air pollution. They pointed to the puffs of smoke emitted from trucks and buses as evidence. They argued that because their cars meet State-imposed emission standards, their cars were environmentally sound. Interestingly, some automobile commuters said that they were enhancing the attractiveness of public transit by not adding to already-crowded conditions on the subway.

### Travelers' Perspective

Automobile users were consistent in expressing their travel perspective as "I need to get to and from work as quickly, dependably, safely, and comfortably as possible." In describing how they decided to get to and from work and business appointments, participants presented a wide assortment of travel needs, concerns, and route choices indicative of the complex nature of travel patterns and travel resources in and around the Manhattan CBD. However, in describing their reasons for choosing to travel by automobile, participants generally fell into one of two categories.

### Two Groups

Members of the first group claimed to travel exclusively by automobile because of what they perceived to be special personal or work-related needs. "I need my car for work" or "transit is too far from my home" were among the reasons these travelers mentioned. Interestingly, these travelers often viewed themselves as "different" from or "more sensitive" than travelers who used public transit. In fact, they were also somewhat price insensitive. Accordingly, it may cost them more out-of-pocket money or cause an increase in employer-provided payments or a change in work or residential location, but these people will not use public transit. When measures to restrict automobile access or reduce automobile subsidies were suggested, many of these automobile users balked loudly and argued that it was their *right* to travel as they chose. Some even threatened to change jobs if they could not drive in and around Manhattan. They saw it as government's responsibility to provide the necessary vehicular capacity.

Members of the second group were more receptive to improved transit and willing to use it, but decided that the automobile was the superior travel option given their current personal, work, economic, and transportation conditions. They carefully weighed such critical factors as travel costs, time, reliability, predictability, and safety in reaching their travel mode decision. This group, as well as the other group, placed increasing importance on quality of service factors, such as comfort, convenience, and human or interpersonal factors. This second group was more price sensitive and aware of transit. In some cases these travelers were attracted to their cars because of economic incentives, such as employer parking/automobile subsidies, free on-street parking, or family carpools. In other cases these travelers were retreating from public transit in order to attain the control they felt they needed in order to get to their destination reliably and safely.

### Commuter Perspective

Commuters generally had a consistent perspective in terms of their awareness of the total travel experience, basic transportation factors, emerging service-quality issues, and cost. Although mentioned last, cost appears to play a dominant role in influencing those travelers who use the car and may be the most intractable issue to resolve equitably.

### Door-to-Door Perspective

Travelers explained that they view their trip in its entirety rather than as a series of short trips and transfers. Importantly, the overall attractiveness of a trip is constrained by the quality of its least desirable segment. For instance, commuting by public transit may not be desirable if the commuter railroad is excellent but the subway is problematic. On the other hand, traveling north-south in the CBD by private automobile may be undesirable if it is subject to traffic delay or parking is unavailable. Similarly, midday travel within Manhattan using a superior subway service is viewed as unacceptable if connecting to the crosstown bus results in delay due to traffic. This door-to-door perspective of participants highlights the need for coordination among all of the region's transportation agencies as well as the value of corridor-based planning. Planning and marketing efforts should take this door-to-door perspective into account if public transit is to increase its share of the travel market.

### Transportation Basics

Transportation planning axioms indicate that travelers behave logically in making their travel decisions. Automobile users consider such factors as travel time, reliability, predictability, safety, and the availability of information. When transportation does not meet these basic criteria, travelers look for other means that do so (i.e., they look for the means that will enable them to be in control of their travel). Losing this control was a frequent and strongly emotional concern raised without solicitation in all of the roundtable discussions. This reaction suggests that loss of control is a key factor in attracting people to use the automobile and in driving people out of public transit, and returning a sense of control can contribute to convincing them to return. Automobile commuters point out that if they are caught in traffic as a bus passenger, they must wait out the delay while they are trapped in the bus; however, if they are caught in traffic while driving their car, they can take an alternate route, listen to their radio, regulate their air conditioner, or stop to call their office and have a cup of coffee. To return a sense of control to transit users, transit reliability, transit predictability, travel time, system connectivity, and the information necessary to make logical choices are critical factors.

It should be noted that the transportation requirements of some automobile travelers may make it impossible for them to respond to any changed circumstances, and they will continue to use the car.

### Importance of Service Quality

Quality of service surfaced as a major issue through the focus group sessions. Some participants explained that they are willing to pay a premium to use the automobile because they are worthy of the superior ride and the freedom it provides. This is particularly noteworthy since these costs are often not borne by the automobile user. As pointed out in Decision Research Corporation's analysis, service quality has become a critical issue to service industries nationally (10). As a service provider, therefore, public transit must offer a high-quality, user-friendly product that is priced competitively. In that regard, automobile travelers believe that they deserve to be treated as human beings and in a manner that protects their dignity and personal well being. Other service-related concerns included crowding, communication, and information availability. These need to be incorporated with the transportation basics to reinforce the transit user's sense of control.

### Cost Considerations

Automobile travelers consistently reported the availability of free employer-provided or on-street parking. Out-of-pocket costs were also reduced through employer-provided reimbursement of parking, tolls, and other travel expenses. Further, reductions in automobile expenses result from tax regulations that provide for the deductibility of automobile travel expenses incurred during business-related travel. Midday travelers were treated similarly with regard to the use of taxis and car services. This results in a cost advantage for automobile use, as the true costs often are not borne by the user. Accordingly, transit is at a competitive cost disadvantage.

Many participants indicated a willingness to use transit if employer and tax treatments of automobile and transit travel costs were the same.

### Recognition of Public Transit Improvements

Travelers recognized recent improvements in the region's transit system from personal experience or from conversations with others. However, their knowledge of improvements often was limited or dated. Reduced graffiti, new subway cars, and commuter railroad improvements were appreciated by participants as a sign that transit is getting better. However, according to participants, these improvements by themselves were not sufficient to cause them to switch to transit. Some travelers required additional transit-based incentives, while other travelers required an automobile-based disincentive to motivate them to switch to transit.

### Automobile Reduction Measures

Proposals to reduce automobile use through restrictions or user fees were regarded negatively by participants. They argued that a program based solely on disincentives is a clear message that government is shirking its responsibility and is looking for the easy way out. Participants regarded it as government's responsibility to provide sufficient capacity for travelers to use their mode of preference. Participants said that it was not

reasonable for them to be forced from their cars without providing them with a viable transit alternative. Participants suggested a "carrot and stick" approach to reducing automobile use. A clear implication of such a carrot and stick approach is the need for agency coordination.

Participants reacted positively to a reduction of CBD parking when coupled with the development of non-CBD parking facilities at intermodal connections (i.e., park-and-ride). However, participants stressed the need for improved transit services at these facilities.

Similarly, Manhattan and midday travelers reacted favorably to the development of taxi stations for group riding and reducing taxi cruising. Automobile occupancy requirements were received more favorably when coupled with carpooling incentives, such as high-occupancy vehicle lanes and reduced tolls.

### Alternatives

Auto commuters who live within the five boroughs of New York City often mentioned express bus service, water ferries, and private vans as preferable to local buses and the subway. However, it may not be the type of mode in itself that determines a commuter's preference but rather the perceived degree to which a particular mode meets his or her travel requirements. If a new ferry service were to operate infrequently and during limited hours, for example, it would follow that commuters would not use the service. Similarly, if an individual subway line were regarded as being relatively uncrowded, safe, reliable, clean, and comfortable, it would follow that some automobile commuters who live and work in proximity to that service would switch to public transit. An example of this situation can be seen on the 7th Avenue/Jerome Avenue Interboro Rapid Transit subway line, where the introduction of new cars and improved communication by the operator coincided with increases in ridership. Increases are presumed to include switches from the automobile as well as from other less desirable subway lines.

In this context, participants suggested that vans and jitneys could be made available where transit is inappropriate.

### Gaining Travelers' Confidence

Travelers need to believe that their interests are important to the transit operator and that the operators are making a genuine effort to meet rider needs. In particular, unpleasant smells, dirt, and unreliable information reinforce the automobile user's perception that transit is the less efficient and pleasant mode of travel. As service-quality considerations are of increasing importance to the automobile user, he or she is less tolerant of unresponsive transportation. Given the financial and logistical ability to commute by automobile, automobile commuters are making a rational choice.

Gaining the loyalty of automobile commuters will require time and a concerted effort to improve the "look and feel" of the system both physically and psychologically in response to travelers' needs. This may include treating riders as valued customers as well as disseminating correct information about current and future system conditions. In that regard, government must be certain that it can deliver promised improvements in a timely manner.

## Marketing Strategies

In any effort to reduce CBD automobile congestion, automobile use disincentives, marketing programs, and transit improvements should be targeted to meet the needs of individual market segments.

The results of the study indicate that projects to discourage travel by automobile should be developed with the involvement of the public, should not be heavy-handed in their implementation, and should be presented as part of a comprehensive program to improve mobility in the region.

The study defined a broad market segment of potential automobile-to-transit switchers and identified some of the attitudinal and behavioral characteristics that can be used to fine tune this market into subgroups. However, in order to determine the size and distribution of these target markets a follow-up quantitative research study is necessary. The study would measure the incidence of these subgroup characteristics across quantifiable sociodemographic and geographic factors.

The study's use of focus groups allowed the agencies to gain an appreciation for the differences in the emotional level of responses and for the defining of subjective measurements that may not have surfaced through quantitative research. In addition, the focus groups were able to uncover and explore in detail the importance of two critical influences on the modal decision.

The *first influence* is the availability of financial incentives to use an automobile. Incentives include free parking, employer-provided automobile-commuting subsidies, "around-town" travel reimbursements, and tax deductibility. For some, simply removing these incentives will cause them to switch to public transit. For others, removal of these incentives in concert with improvements to transit will persuade them to switch.

The *second influence* is travelers' underlying need to be treated in a manner that respects their dignity and acknowledges their basic concerns. This is distinct from having transportation perform reliably. Fulfillment of this attitudinal requirement for service quality not only promises to make travelers more receptive to marketing and capital programs but likely will make travelers more tolerant of transit's shortcomings while improvements are under way. It encompasses many changes, such as improved communications with riders, realistic advisories on transit improvements and delays, and a friendly and respectful attitude among operating and field employees. These two key influences should be addressed actively as part of any effort aimed at changing the modal decision of automobile users.

## IMPACTS OF THE STUDY

The study's final report of March 1988 called for comprehensive measures. However, an immediate payoff of the study has been to establish a common basis of understanding among the participating agencies. The focus groups provided an opportunity to probe the public about the agencies' parochial issues in a multiagency setting. Accordingly, the study and its focus groups provided the opportunity for the participating agencies to observe and learn together.

The process of coordinated planning and implementation has been adopted in numerous transportation projects consistent with the findings of *The Manhattan Auto Use Decision*

*Study*. The city's 2-month emergency closure of the Williamsburg Bridge and the Port Authority's roadway access improvements at LaGuardia Airport both depended on cooperative interagency efforts. Studies on the development of improvement strategies in corridors throughout the city were undertaken at the Department of City Planning and the MTA. While the studies and analyses called for by the CBD Access Group are under way at NYCDOT, more coordination needs to be implemented if the region is not to slip back to its business-as-usual status.

New York City has advanced its congestion management efforts. Specifically, the city

- Has increased the fines for illegal midtown parking,
- Is promoting commuter ferry terminals with parking availability, and
- Has developed a marketing campaign for park-and-ride sites at Shea Stadium and Kennedy International Airport as a bellwether for future efforts.

In the fall of 1987, NYCDOT initiated its "NY Get Smart" campaign. This effort was intended to promulgate Strategies for Mobility, Access, and Reduction of Traffic (SMART). As a part of this effort, corporations and businesses located in Manhattan were solicited to contribute to a reduction in CBD congestion. The effort called for companies to help in such ways as the following [as described by the NYCDOT (11)]:

1. Designate a mobility coordinator to assess employee commuting patterns;
2. Support mass transit by promoting transit subsidies such as the TransitCheck, discouraging automobile subsidies, and rewarding carpoolers and transit users;
3. Reevaluate company transportation policies and consider midday transit alternatives and shifting delivery schedules to early morning and late evening hours; and
4. Contribute ideas, skills, and energy to make things happen.

With regard to the status of the city's research and planning effort, work started in March 1989 on a NYCDOT study to quantify the empirical relationship between motor vehicle volumes/speeds and carbon monoxide. This study will result in the development of a model that will test the impact of different policies on vehicle trips and resultant carbon monoxide levels. Accordingly, specific mechanisms to reduce carbon monoxide and automobile congestion can be developed.

As part of the study, the various mechanisms to reduce congestion and carbon monoxide will be evaluated for their physical, logistical, legal, economic, and fiscal impact. Various combinations of mechanisms will be developed and evaluated. However, the implications of *The Manhattan Auto Use Decision Study* need to be considered if a successful effort is to be implemented.

An important part of any follow-up work to *The Manhattan Auto Use Decision Study* is the quantification of automobile and transit users' origins and destinations, as well as automobile users' attitudes on diversion to transit use. In that regard, the previous regionwide multimodal Origin-Destination (O-D) survey was conducted in 1963. In 1979 the New York City Transit Authority (NYCTA) conducted an O-D survey of subway users. Both sets of data are now out of date. In response to this widely

perceived data void, the MTA has initiated a Total Travel Project that will aggregate Manhattan-bound travel within the MTA district by mode and origins-destinations. This will include automobile travel. A component of the project will be a regional telephone survey that will identify potential market areas and solicit views held by travelers, including automobile users. This information should enable the quantification of automobile users and the development of programs tailored to attract them to transit.

With regard to the availability of transit, transit information, and the marketing of transit services, a midday marketing campaign on the CBD's two north-south corridors was initiated by MTA. *The Manhattan Auto Use Decision Study* contributed to the development of MTA's midday marketing campaign. This campaign was tailored directly to the automobile user and those who do not use the subway as part of their midday travel. This was an essential effort to alter people's perceptions of transit improvements and their travel behavior.

Early in 1988, the MTA Board adopted a station parking policy, which for the first time provides for the development of parking programs at MTA operating agencies and funding assistance by the MTA Capital Program. This significant policy change should assist the MTA in responding to the study's call for development of parking facilities at intermodal connections outside the CBD.

The study found that cost is a significant factor influencing modal use. In that regard, public and private transit operators of the region continue to support TransitCenter, an alliance with the city of New York and the business community, for the promotion of transit. The TransitCenter administers the \$15 public transit fringe benefit, known as TransitCheck, authorized by the Deficit Reduction Act of 1984. This enables employers to subsidize employee transit costs up to a maximum of \$15 per month as a nontaxable fringe benefit. Nearly 900 companies have participated in generating over \$3.5 million in revenue for the TransitCheck program. The allowable fringe benefit should be increased if the tax treatment of travel costs is to be borne equitably by transit users and automobile users.

Another possible means to reduce transit travel costs is Automatic Fare Collection (AFC). AFC may enable a reduction in intermodal travel costs to encourage use. The NYCTA is working toward AFC implementation by 1996.

The problem of congestion management has entered the national consciousness. For example, a *New York Times Magazine* article entitled "National Gridlock" attested to the fact that arterial congestion is a national phenomenon (12). This and numerous other articles suggest that a pervasive national problem requires national remedies. In its cover story of September 12, 1988, entitled "Gridlock," *Time* magazine stated that on a national scale, "breaking gridlock will take all the ingenuity the U.S. can muster, especially in a time when the nation cannot afford to buy millions of yards of concrete to pave over the problem" (13). The federal response, however, has not been encouraging.

In its television series "Currents," WNET Channel 13 produced a show during the summer of 1988 entitled "Car Wars." In it Alfred A. Dellibovi, President Reagan's UMTA administrator, was asked why transit subsidies were cut at a time of increasing automobile congestion when transit appears to be the only viable alternative for reducing congestion in many

urban areas. In response, Mr. Dellibovi stated the need for increased reliance on privatization.

If effective solutions using the findings of this and other market research are not reflected in the region's strategies to alter travel behavior (i.e., to achieve marked shifts from travel by automobile to travel by transit), what can we expect?

- Congestion may itself become the ultimate constraint in travel behavior as a new equilibrium in mode split is reached.
- Urban congestion will continue and suburban congestion will spread, as indicated by UMTA's recent suburban mobility initiative.
- Air quality will be degraded locally, further contributing to the greenhouse effect around the world.
- Transit's share of the CBD travel market will continue to decline, stabilize, or increase only slowly, as individual travelers continue to respond to what they consider to be their logical choices.

By the year 2000 the projected work force in the MTA region will increase by 2.3 million people. Their anticipated travel needs must be taken into account to allow growth in the region's economy. The challenge facing policy makers is to develop and implement solutions that respond to and modify the public's attitudes and travel behavior. Half-hearted measures will not achieve the desired result.

#### SOME ADDITIONAL THOUGHTS ON CITIZEN INVOLVEMENT THROUGH FOCUS GROUPS

*The Manhattan Auto Use Decision Study* and the planning process of which it was part illustrate an effective use of the focus group technique. The focus groups provided a means by which a broad array of regional agencies were able to sit together to gain a common understanding of the automobile-using public's perspective regarding the congestion management problem and potential traffic mitigation strategies.

Focus groups allowed the agencies far more control over the scope and depth of issues discussed than would have traditional citizen involvement methods. For example, the groups were arranged to include all relevant market segments as well as to facilitate group interaction. Although screening of participants allowed the inclusion of a cross section of citizens and views, the research remains qualitative in nature, and thus its findings cannot be projected to quantify the attitudes of the public at large. Client agencies observed the discussions from behind a one-way mirror so that they were able to get firsthand knowledge of the groups' reactions without being confronted directly by participants. Whereas a discussion guide provided prompts for the moderator in covering those topics deemed most important by the agencies, the ability of the focus group moderator to react to a dynamic situation was critical in directing the discussion and controlling group interactions so as to bring out participants' true feelings and the basic motivation behind their behavior and attitudes. Likewise, the focus group moderator's perceptive interpretation of the group discussion was a key ingredient in producing meaningful and actionable research results.

Focus groups cannot always replace traditional citizen involvement techniques. Most importantly, focus groups are not open forums. Thus, they do not provide an opportunity for all citizens to be heard. Unlike public hearings, focus

groups do not allow citizens to directly confront officials, nor do they provide an opportunity for open debate.

Focus groups are an appropriate method for obtaining citizen input during a project's evolution. Unlike traditional public forums, focus groups provide an informal, nonthreatening environment for the public to voice its views and for clients to listen. With a better understanding of citizens' reality, officials should be in a better position to communicate effectively with the community during the planning and implementation stages of a given project. The information obtained in focus groups can be especially valuable in leading to project designs that are sensitive to the public's perspective.

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#### REFERENCES

1. *Hub-Bound Travel 1986*. New York Metropolitan Transportation Council, New York, Nov. 1987.
2. D. G. Burwell and C. Meyer. *A Citizen's Guide to Clean Air and Transportation*. Oct. 1980.
3. M. Pryer. Tackling Toxins from Motor Vehicles. *EPA Journal*.
4. *An Approach to Reducing Vehicle Congestion in New York City*. New York City Department of Transportation, New York, 1986.
5. *White Paper on Reducing Vehicle Congestion/Pollution in New York City*. Coalition for Improved Transportation and Air Quality, New York, Jan. 14, 1987.
6. *The MTA Capital Program*. Metropolitan Transportation Authority, New York, 1987.
7. *MTA Strategic Planning Initiative*. MTA Planning Department, New York, Sept. 1985.
8. *Setting a Ridership Goal for New York City's Subways*. Charles Rivers Associates, New York, Feb. 1987.
9. *Supporting Regional Growth: The Trans-Hudson Connection*. Port Authority of New York and New Jersey, New York, Jan. 1985.
10. *The Manhattan Auto Use Decision Study*. Decision Research Corporation, New York, March 1988.
11. *NY Get Smart*. New York City Department of Transportation, New York, 1987.
12. J. Gleick. National Gridlock. *New York Times Magazine*, May 8, 1988.
13. G. Bolte, T. McCarrol, and E. M. Reingold. Gridlock. *Time*, Sept. 12, 1988.

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