

MMCC

Mayor's Midtown
Citizens Committee

Midtown Tour and Charter Bus Parking Initiative

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MIDTOWN TOUR AND CHARTER BUS PARKING INITIATIVE

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Introduction

Since 1975, the Mayor's Midtown Citizens Committee (MMCC) has been engaged in numerous efforts to advise succeeding mayoral administrations on improving quality of life issues in the midtown area. Recently, as the City has announced its goals of increasing the number of tourists to 50 million per year, the MMCC has undertaken a study to assess the charter and tour buses that overwhelm midtown. In this effort, we have sought to project future demand for tour and charter bus parking spaces in the midtown core district.

The lack of sufficient parking space for tour and charter buses in midtown has been evident for quite some time. Over the years, several efforts were undertaken to address the problem. Studies were completed and meetings were convened with traffic engineers and representatives of the public and private sectors as well as community-based organizations. Unfortunately, these efforts were unable to deliver viable solutions. Therefore, the MMCC Bus Subcommittee was reconvened last year to reinvigorate the discussions by engaging those parties with a vested interest in this significant problem and taking a new look at the situation.

Tour and charter buses compete for parking spaces in midtown with the hundreds of commuter buses that currently cannot park on Port Authority of New York and New Jersey (PANYNJ) facilities while they wait for their return trips to New Jersey. The final Environmental Impact Statement for Access to the Region's Core (ARC) statistics reported on October 28, 2010 by the Tri-State Transportation Campaign indicate that the ARC project, "...would have shifted daily 11,530 trans-Hudson bus trips and 31,590 trans-Hudson car trips to rail by 2030." Ultimately, it is estimated, "...in the absence of the ARC rail tunnel that another 1,703 buses will be needed by 2030 to accommodate growth in cross-Hudson trips." This increase in the number of commuter buses due to the cancellation of the ARC project is exclusive of additional tour and charter buses. The PANYNJ may retain its \$3 billion in federal funds, a portion of which could be applied to addressing the scarcity of bus parking spaces in midtown.

With ever increasing demand and willingness to support the tour and charter bus industry's considerable contribution to the local economy, we seek to pursue all possible solutions. In that effort, the MMCC, with the support of Council Member Christine Quinn, has developed and executed a survey of private tour and charter bus companies to document parking demand during a given calendar year. The recommendations included in this report are those of the MMCC Bus Subcommittee.

Methodology

Survey Design

The survey consisted of five questions intended to quantify demand of parking spaces needed during peak months, days and hours. Current costs incurred while doing business in New York City were collected - including parking summonses - as well as comments and suggestions from the bus companies. A number of bus companies and Council Member Quinn's staff participated and/or vetted the questions prior to release of the survey. The survey focused on the midtown area from 30th to 60th Streets, while excluding any parking needs already satisfied by the PANYNJ. The full text of the survey can be found in [Appendix 1](#).

Data Collection

Demand

The survey was administered online using an internet-based tool, which made possible an expeditious tabulation of results. The survey was sent by e-mail to a database created by the MMCC Bus Subcommittee of 735 bus companies, located mainly in the Eastern States, with the following parameters: Ohio, Kentucky and Indiana to the West, North Carolina to the South and Maine to the North. Bus companies located in the Canadian cities of Montreal and Toronto were also included.

104 companies responded, approximately 15% of those surveyed, which is an excellent response rate for a survey of this nature; demonstrating a sincere level of interest in the subject matter. Most respondents added personalized comments including one as follows, "...I am so glad you are doing this survey. Parking has been a problem in New York for a long time." The Survey Participant Bus Companies are listed in [Appendix 2](#), however, it is safe to assume that this exercise has not captured the totality of the present or future demand.

Supply

Utilizing the map and listing of available bus layover parking spaces published online by the New York City Department of Transportation (NYC DOT)¹, the Bus Subcommittee conducted a physical investigation and inventory of actual available spaces by walking through the subject area. Each bus was assumed to require approximately 50 linear feet of parking space which allows for maneuvering in and out of a given space. Driveways and curb cuts, fire hydrants, locations without bus parking signage or those reserved for Metropolitan Transit Authority (MTA) buses, were excluded from the NYC DOT listing and map cited above.

The Bus Subcommittee members identified sites that could be designated for bus parking. The potential bus parking spaces identified were not in the immediate vicinity of residential buildings or areas required for loading of commercial merchandise.

Finally, to familiarize itself with the specifications of a bus garage in Lower Manhattan, the Bus Subcommittee reviewed the New York City Department of City Planning Transportation Division's *Chinatown Bus Study* dated October 2009.² This allowed us to identify properties that could accommodate a large number of buses. Using databases from both the New York City Departments of Buildings and Finance, four locations were identified that are viable sites for interim bus parking lots or the construction of a permanent bus garage.

¹NYC DOT Bus Layover Parking Spaces: <http://www.nyc.gov/html/dot/html/ferrybus/charterbus.shtml>

² Chinatown Bus Study, October 2009, New York City Department of City Planning, Transportation Division
http://www.nyc.gov/html/dcp/pdf/transportation/chinatown_bus_pt1.pdf

Key Findings

- ★ *Currently, there is a deficit of up to 173 spaces for bus parking in midtown during seven months of the year.³*
- ★ *The demand previously noted does not take into account the parking demand for 1,703 additional commuter buses required to replace ARC, or the growth in bus travel related to increased tourism in New York City.*
- ★ *The deficit is likely to increase with the loss of available curbside bus parking sites resulting from additional real estate development.*
- ★ *Many buses cruise around for hours adding to traffic congestion and air pollution in a neighborhood that has the third highest asthma rate in Manhattan, after East and Central Harlem.⁴*

³ Demand of 263 bus parking spaces minus supply of 90 parking spaces – see pages 9 and 10 of this report.

⁴ 2009 Community Health Survey, New York City Department of Health, <http://www.nyc.gov/html/doh/html/community/community.shtml>

Demand for Bus Parking Spaces and Peak Occupancy Periods

Respondents accounted for 27,196 buses requiring parking on an annual basis. The peak demand periods are as follows:

Largest Monthly Volumes

For seven months of the year, monthly bus volume typically exceeds 2,300 ([Appendix 3](#)).

LARGEST VOLUME MONTHS	NUMBER of CHARTER and TOUR BUSES VISITING per MONTH
May	3,036
December	2,977
November	2,964
June	2,664
October	2,509
September	2,458
April	2,385

Theatre Matinee Days: Peak Demand Days and Hours

Saturdays and Wednesdays experience the highest demand for bus parking spaces.

- The 104 respondents accounted for a **peak volume of 174 buses** on Saturdays, during the month of November, ([Appendix 3](#)).
- On Saturdays and Wednesdays, respondents reported that 80% of the total number of buses need parking during the same **peak occupancy hours: 10:00 to 11:00 a.m. and 2:00 to 7:00 p.m. respectively.**

Of the 735 bus companies surveyed, it is difficult to estimate what percentage of the actual demand the 104 companies which responded represent.

According to the New York Metropolitan Transportation Council (NYMTC) in 2006 there were 892 more buses entering than leaving Manhattan below 60th Street before 10 a.m.⁵ If we limit the figure solely to those buses arriving from the North and the

⁵ NYMTC Hub-Bound 2006 Vehicle Classification and Occupancy Survey Report http://www.nymtc.org/files/vehicle_classification/VCOS_Report_2006.pdf

West, the figure is 324 buses. NYMTC conducted its survey during the summer (low activity season) and fall of 2006, on various days for each location including Tuesdays, Wednesdays or Thursdays. Of these three days, Wednesdays represent the highest volume in tour and charter bus travel. Based on adjustments, when taking into account the ratio of peak demand over average demand reported, and deducting the approximately 185 buses parked at PANYNJ facilities or private parking locations,⁶ the peak demand amounted to **256** in 2006.

Between 2006 and 2008 the number of domestic visitors to New York City grew by 3%⁷. During the same period, NYMTC reports in its annual “Hub Bond Travel at a Glance” that the volume of buses entering from the North and the West has grown by **2.73%**. Thus the peak demand in 2008 would have been approximately **263** bus parking spaces [$256 \times 1.0273 = 263$].

Based on our estimates, the tour and charter bus daily parking space peak demand is significantly above the 140 spaces reported by the bus survey respondents. The figure could be higher than 263 spaces depending on the growth rate in bus traffic and tourism since 2008.

Cost of Doing Business In New York City

Pursuant to our survey, the bus companies consider parking fines as part of the cost of doing business in the city, with a reported typical parking ticket fine of \$100. Taking the total yearly amount of parking fines paid by the respondent bus companies divided by the number of buses parked in the city over the same period, we estimated an average cost of \$37 in parking tickets per bus, per day, which could instead be applied to legal, revenue-generating parking.

Some bus companies reported spending money to send their drivers to rent rooms in New Jersey while others cannot find parking and send their, “... empty buses driving around the city all day long, or going back and forth to New Jersey, generating pollution and adding to traffic congestion.” Although it is difficult to quantify the figure with precision, these practices have a significant impact both on city residents and local businesses.

⁶ Provided in December, 2010 by Director of PANYNJ's Tunnel Operation.

⁷ NYC & Company, the official guide, <http://www.nycgo.com/?event=view.article&id=78912>

Supply and Availability

Based on our survey of NYC DOT's published locations, we identified 177 authorized curbside bus parking spaces in midtown. A map of the locations we identified is provided in [Appendix 4](#). This number excludes the numerous layover parking spaces currently dedicated to the MTA.

We observed that commuter buses, jitneys, limousines, trucks, and other large vehicles illegally occupy a significant proportion of authorized spaces. Many respondents complained of that situation in their comments.

Due to the various sizes of non-authorized vehicles parked, the remaining available spaces are often too short to accommodate tour and charter buses, which require a minimum parking space of 50 linear feet. In addition, commuter buses can park legally in these parking spaces.

Based on our findings, we estimate that there are at most 90 spaces (approximately 50% of the allotted spaces) available for parking of tour and charter buses in midtown.

Many of these parking spaces are adjacent to lots slated for residential development as part of the Hudson Yards Rezoning or Riverside South Development. Within the next five years, it is likely a significant portion of these spaces will be inaccessible due to construction and will subsequently become unfit for bus parking.

Short Term Recommendations

Add Curb Side Parking Spaces

There are potentially 70 additional curbside locations that have been identified as appropriate for charter and tour bus parking, a list of which appears in [Appendix 5](#).

Improve Current Information

Currently, the NYC DOT map and available bus parking locations list cited on page 5 combines charter, tour and MTA bus parking locations. We suggest the map and available bus parking locations list be bifurcated; one dedicated to charter and tour buses and one solely for MTA buses. Bus companies surveyed suggested that a phone number be provided so that drivers can access updates on parades and public events that alter traffic patterns. A good example is Alert DC, a system administrated by the District of Columbia to “provide rapid text notification and update information.”⁸

Standardize and Install Meters at Parking Spaces

Standardize and paint outlines of bus parking spaces on the street which would reduce the wasted space generated by alternating occupancy between long and short vehicles. It would also convey the message that these large spaces are reserved solely for tour and charter buses.

Meters charging up to \$50 per day, per bus (the cost of which could be covered by a \$1 per day, per passenger fee), would generate an estimated \$1.5 million⁹ a year in revenue for New York City and would further discourage illegal parking. These fees could also ensure the economic viability of future bus parking facilities.

⁸ Alert DC : <https://textalert.ema.dc.gov/index.php?CCheck=1>.

⁹ Of survey respondents: 27,196 bus parking spaces annually x \$50 parking meter charge per bus, per day.

Enforce and Inform through an Intelligent Parking System

An Intelligent Parking System ([Appendix 6](#)) as installed in San Francisco and other large cities would maximize the use of current parking spaces, facilitate enforcement and reduce congestion and idling. Assuming the collection of an average parking meter fee of \$40 per day, the turnkey cost of \$400 per space could be recouped in ten days.¹⁰ A similar system is currently in use at Roosevelt Island. The suggested Intelligent Parking System would include the following features:

- Two sensors embedded in the pavement of each parking space to determine if the proper vehicle legally occupies a space. Wireless transmitters then send the information to a central database.
- Bus drivers can locate the closest available parking spaces on mobile applications on their cell phones.
- The New York Police Department (NYPD) would be able to view the information at a central location which would facilitate deployment, as needed, of immediate enforcement personnel.

Collect Bus Parking Demand Statistics

NYMTC produces very valuable surveys and statistics on vehicular movement in our region. Capturing a more detailed breakdown of travel information by bus type (commuter, tour, charter and others) can be translated in determining bus parking demand, and addressing present and future needs of bus parking facilities.

¹⁰ Intelligent Devices, Inc. <http://www.intelligentdevicesinc.com/>

Long Term Recommendations

The participants in the survey suggested that the construction of parking garages is needed in midtown where drivers can rest, eat and then rapidly reach their passenger pick-up locations.

In the 2005 Hudson Yards Rezoning analysis, the city assumed that a new bus garage would be built to satisfy the parking needs of the New Jersey commuter buses going to the Port Authority Bus Terminal (PABT) as well as charter and tour buses.

Although a joint City and PABT study was completed to evaluate locations for a bus garage (with the preferred option of Gavin Plaza located on 39th to 40th Streets, between 10th and 11th Avenues), PABT did not include enough capacity in their plans to service both their own commuter needs and those of the tour and charter bus industry. Moreover, the project is currently not funded.

It should be noted that bus garages are relatively inexpensive to build. The most difficult and expensive proposition would be to find appropriate, available sites on which to build the structures.

The Bus Subcommittee has identified four sites that could be used for either interim or permanent bus parking or bus garages:

- Land located under the elevated West Side Highway (9A) from West 59th to West 65th Streets. While construction proceeds at Riverside South, it would be cost effective to convert this large space to host buses on an interim basis.
- Sharing the NYPD Tow Pound on Pier 76 at West 38th Street. The Tow Pound is a vast structure and the current operator does not use stackers for the towed vehicles. It seems that with a more efficient use of the space, a good portion of it could be dedicated to tour and charter bus parking.
- West 45th Street and West Side Highway: build a structure over the current parking for the Intrepid, which is already hosting a few buses. It is strategically located close to the Theatre District.
- West 30th Street and Dyer Avenue between 9th and 10th Avenues: build a garage elevated over the street. This site provides a large footprint which would allow for a structure of fewer stories. This site provides direct access to the Lincoln Tunnel and to 10th Avenue for vehicles traveling North.

Conclusions

As indicated in the preceding pages, the need for additional bus parking spaces in midtown is a pressing problem that requires immediate and proper attention.

As New York City's economy grows, accommodations for the effects of that growth, including the demand for more bus parking, must be addressed. Provisions must be made for the increase in charter and tour bus traffic. This mode of transportation and its customers are and will be an increasingly important aspect of the local economy.

Each parking facility should provide for 50 to 75 buses in convenient midtown locations. Locations distant from the midtown core are not an option. Easy access and driver convenience are integral components.

These midtown locations may require the acquisition of publicly-owned land and pier development sites, as well as potential condemnation of private properties in areas zoned for manufacturing.

It is further suggested that future long-term projects be privately operated or owned. This approach, once metering of bus parking spaces has been implemented, will better facilitate incremental development. The establishment of financial and operational co-ops, composed of bus and parking companies, is suggested as a viable method of ownership/operation of these proposed parking facilities. The City, and other appropriate public entities, could partner with private interests to see such facilities come to fruition.

The needs enumerated above require timely attention and the MMCC will be following up with City agencies, elected officials, community boards, and private entities to ensure that viable solutions are implemented.

For additional MMCC Bus Subcommittee information, please contact:

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Appendix 1: Survey Questions

Five Questions:

- 1) What is the average number of tour and charter buses your company sends to New York's midtown Theatre District (30th to 60th Streets) each month?
- 2) What is the average number of tour and charter buses your company sends to New York's midtown Theatre District each day of the week?
- 3) At what times do your buses typically arrive and depart from their parking location in New York City? Indicate what percent of buses follow each schedule.
- 4) What is the daily cost of parking each (not all) charter and tour bus in New York City? (Include cost of parking tickets if relevant).
- 5) Any other considerations that we should be aware of?

Appendix 2: Survey Participant Bus Companies

A Friend in New York	Creative Coach Company The Fun Bus	Land Jet INC	Rill's Bus Service	White Plains Bus Co., Inc.
A.S. Midway Trailways	Creative Transportation & Tours (JAM B LLC)	Lanier Motorcoach Charters LLC	Rolling V Bus Corp.	White Plains Bus Company Suburban Charter Service
Academy Bus Lines LLC	Cross Country Coach	Lodestar Bus Lines Inc.	Rukstela Charter Service	Wolfe Adventures & Tours
All-Ways Trans Plus Inc.	DATTCO Inc.	Magic Carpet Tours Bus Service	S & S Coach Company	Shamus Coach Inc.
Amazing Destinations	David Thomas Tours	Martz Trailways	Scenic Seekers Tours	Silver Wheels Travel Tours
AMERICAN TOUR CLUB	DC Trails	Maximum Tours Inc.	Shamus Coach Inc.	Skyport International Services Inc. dba Skyport
Atlantic Coast Trailways	Double A Charter Inc.	McCarney Tours	Silver Wheels Travel Tours	Southern Tier Stages/ Shafer's Tour & Charter
Autocar Excellence Inc.	Educational Journeys LLC	MDT Bus	Skyport International Services Inc. dba Skyport	Southwest Bus Service
Back Mountain Charter Services	Elite Coach	Melard Coach	Southern Tier Stages/ Shafer's Tour & Charter	Sports Travel and Tours
Badder Bus Service Ltd.	Envision EMI LLC	Nason Partners LLC dba Kelley Transit Company	Southwest Bus Service	Stevens Transportation
Blue sky bus tours inc	Executive Coach	Niagara Scenic Tours	Sports Travel and Tours	Stouts' Transportation
Bollman Charter Service	Fantasy Tours and Travel Inc.	Nichols Five Star Charters	Stevens Transportation	Taxi Tours Inc.
Bus Supply Charters Inc.	Gad-About Tours Inc./ A Coach USA Co.	Oneonta Bus Lines	Stouts' Transportation	Terry's Tours Inc.
Capitol Tours	Getaway Tours Inc.	Panorama Tours, Inc.	Taxi Tours Inc.	The Tours Program Inc.
Castaway Motorcoach Tours	Great Canadian Trailways	Paradise Trailways	Terry's Tours Inc.	Trans-Bridge Lines Inc.
Christian Tours - Burke International Tours	Green's Travel Coach	Pennsylvania Bus Association	The Tours Program Inc.	Tuxedo Tour and Travel
Classic Coach	H & R Tours	Peter Pan Bus Lines/Providence Division	Trans-Bridge Lines Inc.	Two Ladies Bus Company LLC
Classic Tours/ Classic Lines/ Classic Cruisers Inc.	Hagey Coach Inc.	Post Road Stages	Tuxedo Tour and Travel	VIP Buses Inc.
Coach Canada/ Trentway- Wagar Inc.	Klein Transportation	Premier Coach Company	Two Ladies Bus Company LLC	Wertz Motor Coaches
Coach Tours	Koning Day Tours Inc.	Rainbow Transportation Services	VIP Buses Inc.	White Plains Bus Co., Inc.
Coach USA	Lakefront Lines Inc.	Raritan Valley Bus Service	Wertz Motor Coaches	White Plains Bus Company Suburban Charter Service
				Wolfe Adventures & Tours

Appendix 3: Bus Parking Demand: Volumes and Peaks

MONTHLY DEMAND FOR TOUR AND CHARTER BUS PARKING SPACES

Monthly	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Demand	1,167	1,350	1,779	2,385	3,036	2,664	1,977	1,930	2,458	2,509	2,964	2,977	27,196

DAILY DEMAND FOR TOUR AND CHARTER BUS PARKING SPACES IN EACH MONTH

Daily	Percentage of Weekly Demand	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Monday	4%	10	13	15	21	26	24	17	17	22	22	26	25
Tuesday	6%	15	19	23	31	38	35	25	25	32	32	39	38
Wednesday	24%	63	81	96	132	163	148	106	104	136	135	164	160
Thursday	11%	31	39	46	64	79	72	52	50	66	65	80	77
Friday	16%	42	54	64	88	109	98	71	69	91	90	109	106
Saturday	25%	67	85	101	140	172	156	112	110	144	142	174	169
Sunday	15%	40	51	60	83	103	93	67	65	86	85	103	101

LEGEND	
	Maximum Demand
	High Demand
	Medium Demand
	Low Demand

Appendix 3: Bus Parking Demand: Volumes and Peaks (continued)

SATURDAYS: HOURLY DEMAND FOR BUS PARKING SPACES

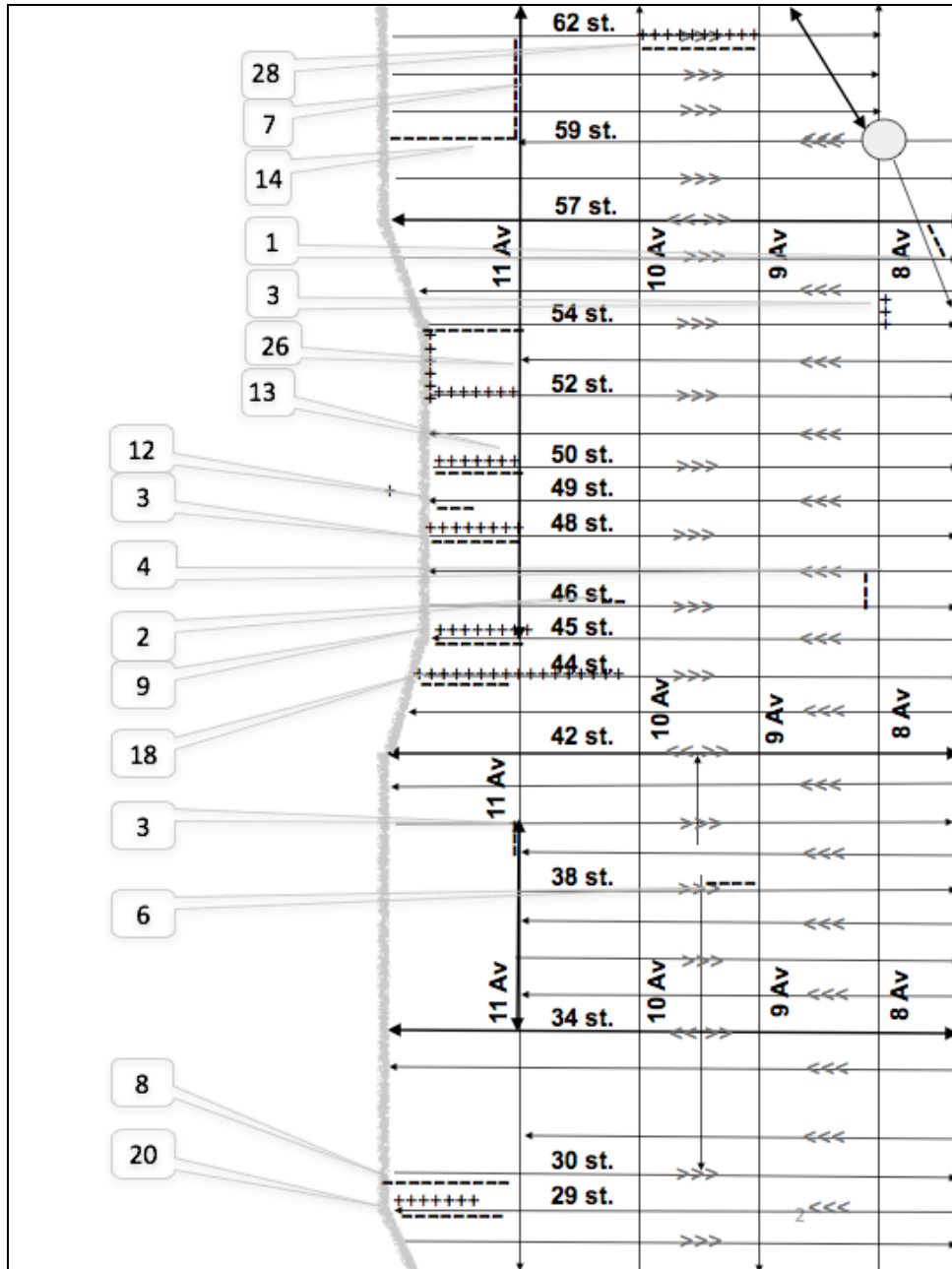
HOURS On SATURDAYS	Percentage of Total Daily Bus Parking Spaces Demand	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12 AM to 7 AM	1%	1	1	2	2	2	2	2	2	2	2	2	2
7 AM to 10 AM	40%	27	34	41	56	69	63	45	44	58	57	70	68
10 AM to 11AM	80%	54	68	81	112	138	125	90	88	116	114	140	136
11AM to 2PM	60%	41	51	61	84	104	94	68	66	87	86	105	102
2PM to 3PM	80%	54	68	81	112	138	125	90	88	116	114	140	136
3 PM to 7 PM	75%	51	64	76	105	129	117	84	83	108	107	131	127
8 PM to 12 AM	22%	15	19	23	31	38	35	25	25	32	32	39	38

WEDNESDAYS: HOURLY DEMAND FOR BUS PARKING SPACES

HOURS on WEDNESDAYS	Percentage of Total Daily Bus Parking Spaces Demand	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12 AM to 7 AM	1%	1	1	1	2	2	2	2	2	2	2	2	2
7 AM to 10 AM	40%	26	33	39	53	66	60	43	42	55	54	66	64
10 AM to 11AM	80%	51	65	77	106	131	119	85	84	109	108	132	128
11AM to 2PM	60%	38	49	58	80	98	89	64	63	82	81	99	96
2PM to 3PM	80%	51	65	77	106	131	119	85	84	109	108	132	128
3 PM to 7 PM	75%	48	61	72	99	123	111	80	78	102	102	123	120
8 PM to 12 AM	22%	14	18	22	30	36	33	24	23	30	30	37	36

LEGEND	
	Maximum Demand
	High Demand
	Medium Demand
	Low Demand

Appendix 4: Current Bus Parking Space Locations Map



LEGEND

+++++++ North or East Curb

----- South or West Curbs

Numerals in balloons are the number of bus parking spaces available on that block

Appendix 5: Additional On-Street Bus Parking Suggested Locations

Sug- gested Street(s)	Suggested Avenue(s)	Side For Suggested Parking Space(s): On Streets: N & S, On Avenues: E & W	Number of Suggested New Spaces	Description and Comments
30 th St	11 th -12 th Avenues	N, S	5	Proposed parking locations on N and S sides of street, currently commercial parking
30 th St	10 th -11 th Avenues	N, S	5	Proposed parking locations on N and S sides of street, currently commercial parking
30 th St	9 th -10 th Avenues	S, Mid-Block	3	Proposed parking locations on S side of street, mid-block, reorganize parking on the median of the plaza
31 st St	9 th -10 th Avenues	N, S	5	Commercial parking now on both sides - along the railway cuts on N side
31 st -33 rd Streets	9 th Avenue	W	4	Proposed parking locations W side of Avenue, along the railway cuts, across from Farley Building's rear entrance
33 rd St	11 th -12 th Avenues	N, S	8	Proposed parking locations on N and S sides of street, dependent on construction schedule- interim until construction starts
37 th St	9 th -10 th Avenues, between Port Authority Bridges	N, S	3	Proposed parking locations on N and S sides of street, over Lincoln Tunnel cuts - Construction complete or close to complete - Port Authority and/or DOT
38 th St	9 th -10 th Avenues, between Port Authority Bridges	S	3	Proposed parking locations S side of street, over Lincoln Tunnel cuts - Construction complete or close to complete - Port Authority and/or DOT
39 th St	9 th -10 th Avenues, between Port Authority Bridges	N	3	Proposed parking locations N side of street, over Lincoln Tunnel cuts - Construction complete or close to complete - Port Authority and/or DOT
40 th St	11 th -12 th Avenues	S	4	Proposed parking locations S side of street, per bus drivers, was removed after repaving. Illegally parked MTA buses on N side, plus many de facto spaces in use from 11th to Dyer Avenue
40 th St	Dyer-11 th Avenues	N	2	Proposed parking locations N side of street, many de facto parking spaces in use from 11th to Dyer Avenue
40 th -41 st Streets	11 th Avenue	W	3	Proposed parking locations W side of Avenue, illegally parked buses (40th to 41st) could be made legal
43 rd St	11 th -12 th Avenues	N	3	Proposed parking locations N side of street, currently commercial parking
45 th St	11 th -12 th Avenues, 200 ft. West of 11 th Avenue, 200 feet East of 12th Avenue	S	2	Proposed parking locations S side of street, could be extended to 12th Avenue, 4 spaces
47 th St	10 th -11 th Avenues	N	2	Proposed parking locations N side of street, add new spaces on half of the street which is closer to 11th Avenue
47 th St	11 th -12 th Avenues	N	3	Proposed parking locations N side of street
51 st St	11 th -12 th Avenues	S	2	Proposed parking locations S side of street, near car dealership
53 rd St	10 th -11 th Avenues	N	2	Proposed parking locations N side of street
54 th St	11 th -12 th Avenues	N	3	Proposed parking locations N side of street, make the street one way
55 th St	10 th -11 th Avenues, near 11th Avenue	N	2	Proposed parking locations N side of street, near car dealership
55 th St	10 th -11 th Avenues, near 11th Avenue	N, S	3	Proposed parking locations on N and S sides of street, near car dealership
			70	TOTAL SUGGESTED BUS PARKING SPACES

Appendix 5: Additional On-Street Bus Parking Suggested Locations (continued)

The potential bus parking locations listed in the preceding Appendix 5 are made with the following three assumptions:

- 1) A bus needs 50 linear feet including maneuvering clearance;
- 2) Each location is not in the immediate vicinity of residential buildings;
- 3) Each location is not required for loading/unloading of commercial merchandise.

Appendix 6: Intelligent Parking Systems

WIRELESS EMBEDDED AND SURFACE MOUNT SENSORS

These sensors are wireless for communication as well as power making them ideal for outdoor parking facilities. The advantage of wireless is that no cabling is needed for power or communication.

Two types of sensors are available: embedded and surface mount. The embedded sensors are installed below the surface of the ground which makes them ideal for installations where the sensor needs to be unobtrusive. For example, areas where snow plows are used to clear the parking lot in winter and could damage the sensor if it was not embedded. The surface mount sensors can either be glued or bolted down and are ideal for locations where drilling into the surface is not possible, such as reinforced concrete parking structures.



These sensors determine whether a parking bay is occupied or not by measuring very small fluctuations in the Earth's magnetic field caused by large iron or steel objects, such as cars.

The sensor wakes up every 15 seconds to measure this field. If the measurement has changed to a stable level, a message is transmitted through the Router Box to the Zone Controller. Even if no change is detected, the sensor will transmit the data to the Zone Controller every two minutes, to ensure the controller that it is still operating properly.

Power to the sensor is supplied from 4 D-cells that provide a minimum battery life of 6 years. Wireless communication is achieved via X-Bee network technology. The complete wireless network between the sensor and the Zone Controller is made up of a Wireless Magnetic Sensor placed in each bay, a wireless router near to the monitored bays and a Coordinator which is connected to a Zone Controller.

HOW DOES IT WORK?



INFORM:

Parking guidance begins a long way from the actual parking space. Motorists are able to view real time information on highway signs approaching the parking facility, on the internet, or through a PDA or cell phone. This allows the motorist to make smart decisions and, if needed, find an alternative parking source. This reduces gridlock and traffic issues associated with traditional parking lots.

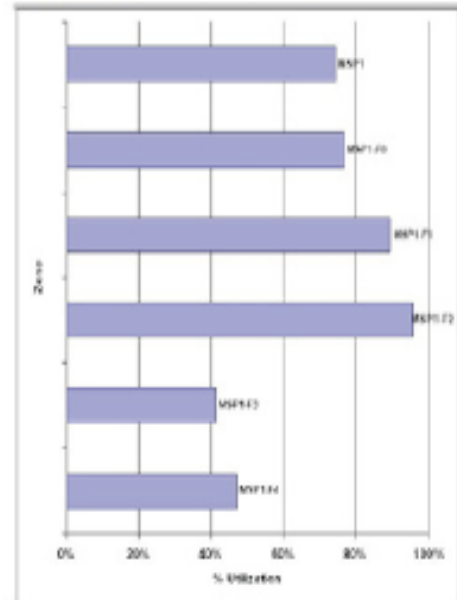
PARKING DATA REPORTS

These reports reflect the current and historical parking activity. Current reports can be viewed and printed for violation enforcement. Historical reports can be used for trend analysis.

- Current Parking Utilization By Zone
- Parking Utilization Summary by Zone By Date
- Parking Utilization Detail By Zone By day, week, month, year
- Current Overtay Violations By Zone
- Overtay Violation By Zone By date
- Current Reservations By Zone
- Current Reservation Overtay Violation By Zone
- Estimated Parking Revenue
- Average time bays are occupied by day, week, month, year
- Bay stay reporting
- Sensor Failures
- Estimated Revenue Collected

Current Parking Utilization

* This report is calculated by taking the number of occupied bays and dividing it by the sum of occupied and vacant bays. This does not include unoccupied sensor, disabled, closed, and reserved bays or not included in these counts.



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Appendix 7: Acknowledgements

Special thanks to all those who worked on the MMCC Tour and Charter Bus Parking Initiative:

Mayor's Midtown Citizens Committee

- William H. Daly, Chairman, Mayor's Midtown Citizens Committee

Mayor's Midtown Citizens Committee Bus Subcommittee

- William Rappaport, Subcommittee Chairman, Mayor's Midtown Citizens Committee Board Member
- Christine Berthet, Subcommittee Vice Chair, Co-Chair of Community Board 4 Transportation Committee
- Heidi Mathis, Administrator, Mayor's Midtown Citizens Committee
- Lolita K. Jackson, Manhattan Director, Mayor's Community Affairs Unit
- Melanie LaRocca, District Office Chief of Staff, Office of Christine C. Quinn, New York City Council Speaker, 3rd District
- Julio Peterson, Director, Real Estate and Corporate Relations, The Shubert Organization, Inc.
- Kate Seely-Kirk, former District Office Chief of Staff, Office of Christine C. Quinn, New York City Council Speaker, 3rd District
- Lee Silver, Corporate Relations Consultant, The Shubert Organization, Inc.
- Jose Soegaard, Policy, Planning and Design Associate, Times Square Alliance
- George N. Stonbely, Chairman & CEO, Spectacular Ventures
- Amanda Younger, Legislative Aide, Community Board 4, Office of Christine C. Quinn, New York City Council Speaker, 3rd District

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