LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

LOAD FACTOR REMEDIATION PROGRAM PLAN

Prepared by:

Los Angeles County Metropolitan Transportation Authority
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I. INTRODUCTION

INTRODUCTION

Purpose of the Remediation Plan

The MTA proposes to implement a comprehensive plan designed to improve service and reduce overcrowding conditions on MTA buses. Using point check data gathered by the MTA and by the Bus Riders Union, the MTA has analyzed the causes for overcrowding and developed this plan to ameliorate those causes.

Causes of Overcrowding

For ease of reference, this report uses the term "overcrowding" to refer to instances when the 1.35 passengers per seat load factor reduction target of the Consent Decree is exceeded. From September through November of 1998 an extensive analysis of load factor monitoring data was conducted to determine specific causes of overcrowding and their relative significance. The analysis reviewed bi-weekly observations of passenger loads on the 20 highest ridership bus lines operated by the MTA during the first eight months of 1998. A total of 1,323 separate instances (discrete, non-overlapping time periods of 20-minute or 60-minute duration depending upon the time of day) of overcrowding were analyzed to determine the specific cause of each instance.

Nearly one-half (49%) of the observed overcrowding was found to result from one or more scheduled bus trips not operating past the point where ridership was being monitored, termed a "missed trip". Missed trips can result from either the lack of a bus or an operator to fill a scheduled service assignment, or an incident which occurs while the bus is in service (e.g. a mechanical failure, accident, passenger incident, or problem affecting the operator of the bus). Roughly two-thirds of the missing trips for which the cause could be documented from MTA records were the result of in service incidents (usually a mechanical failure), and the balance were due to lack of a bus or an operator to fill the assignment (3 of every 4 of these due to lack of a bus).

The next most frequent cause of overcrowding (34% of the time) was found to be poor schedule adherence. This can result in overcrowding because buses arrive ahead of schedule, or early, causing their followers to carry more passengers than intended, or because buses arrive excessively late (defined as more than five minutes behind schedule) causing these buses themselves to serve more passengers than intended. Both early and excessively late buses were found to cause instances of overcrowding about equally.

INTRODUCTION (Continued)

The third observed significant cause of overcrowding (15% of the time) was an excess of passenger demand. In these instances, even if all scheduled service were to be provided, the ratio of passengers to seats exceeded the 1.35 load factor reduction target. Such occurrences could result from passenger demand growth over a period of time, day to day variations in demand, or special events or traffic generators. The analysis also noted a small (3%) proportion of instances of overcrowding which were termed "other" either because they did not lend themselves to one of the preceding characterizations, or the specific cause of the overcrowding could not be attributed to a single factor or event.

Objectives of the Remediation Plan

Based upon the identified causes of overcrowding, and the extent to which each is a factor, the MTA has developed this comprehensive plan to meet existing and future load factor reduction targets on all monitored bus lines. The actions which comprise this plan are related to achieving one or more of the following objectives:

Objective #1: Increase service capacity
Objective #2: Improve equipment reliability
Objective #3: Improve schedule adherence
Objective #4: Increase coach operator availability

The Objectives will be achieved through an investment of 350,000 additional annual revenue service hours (160 added peak buses) and an aggressive program of management actions.

Schedule for Plan Implementation

The entire program of changes and improvements will begin in November 1998 and continue with improvements being implemented throughout 1999 and into the year 2000. The program will be monitored through weekly point check analysis and quarterly reports to the MTA Board.

INTRODUCTION (Continued)

The plan is designed to be implemented in two phases. Phase I activities are designed to provide immediate reduction of the load factors and improvement to the bus system. Phase I activities will resolve the service regulation and resource issues on an interim basis until such time as the more sustainable improvements identified in Phase II will be evident.

Organization of the Plan

The plan is organized into the following categories:

Phase I: (These activities are already in process or will begin immediately)

Increase scheduled service to meet 1.35 load factor requirements (Objective #1)
Implement service improvements extraordinary measures (Objective #2,3,4)

Phase II: (These activities will be implemented as soon as the required resources are available)

Add service to move toward a 1.25 load factor (Objective #1)
Improve operating performance to ensure success at meeting service requirements (Objective #2,3,4)

The specifics of how the MTA will effect improvement in each area is detailed under the topic area. Also included is the expected result, the implementation schedule, and performance measures for each activity.

II. SCHEDULE FOR LOAD FACTOR REMEDIATION PLAN

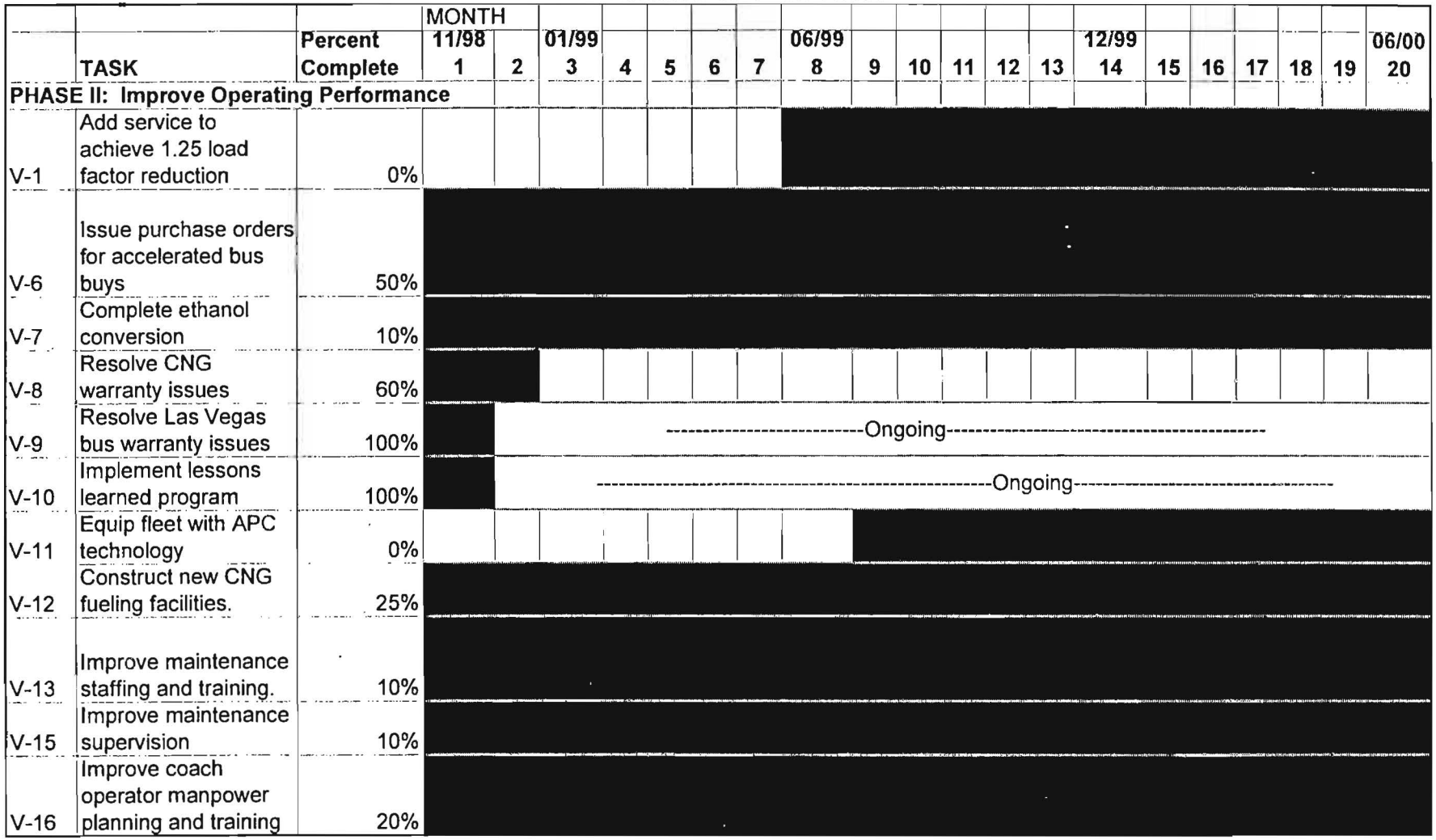
SCHEDULE FOR LOAD FACTOR REMEDIATION PLAN

Implementation Schedule
November 1998 - June 2000

	TASK	Percent Complete	MONTH 11/98 1	2	01/99 3	4	5	6	7	06/99 8	9	10	11	12	13	12/99 14	15	16	17	18	19	06/00 20
PHASE I: Increase Scheduled Service to Meet 1.35 Load Factor																						
IV-1	Increase scheduled service to meet 1.35 load factor requirements	90%																				
IV-4	Implement Staged Buses Program	0%																				
IV-5	Reassign TOS to on-street supervision	50%																				
IV-6	Ensure UTU Labor Contract enforcement	100%																				
IV-7	Supplement point check data analysis	0%																				
IV-8	Conduct radio/BOCC pilot program	33%																				
IV-9	Dispatch a supervisor to problem location	0%																				

SCHEDULE FOR LOAD FACTOR REMEDIATION PLAN

Implementation Schedule
November 1998 - June 2000



As of 12/11/98

III. BUDGET FOR LOAD FACTOR REMEDIATION PLAN

BUDGET FOR LOAD FACTOR REMEDIATION PLAN

	Description of Action	Implementation Date	Cost by Fiscal Year ($ in millions) 1999		2000	2001	2002	2003	Comments	Resp Party
			99 Annual	99 Mid Year						
PHASE I:	**INCREASE SCHEDULED SERVICE TO MEET 1.35 LOAD FACTOR**									
IV-1	Increase scheduled service to meet 1.35 load factor requirements	Aug-98	0.00	1.80	3.60	3.60	3.60	3.60	40,000 revenue service hours costed at $91.21 per hour; does not incl inflation	Woodbury
IV-4	Implement staged buses program	Feb-99	0.00	0.44	0.88	0.88	0.88	0.88	Finalize staged bus program. Pending concurrence with UTU. Based on 10 buses and 12 operators systemwide	Ibarra
IV-5	Reassign TOS to on-street supervision	Feb-99	1.87	0.43	3.17	3.17	3.17	3.17	TOS' are redeployed as TDDs complete their training. FY99 calculation incl. 72 TOS for half a year; midyear incl 6 TOS for 6 mos.	Ibarra
IV-6	Ensure UTU labor contract enforcement	Jul-98	0.00	0.00	0.00	0.00	0.00	0.00	Ongoing training of supervisory staff will ensure consistency and timeliness.	Ibarra
IV-7	Supplement point check data analysis with additional APC ridechecks	Dec-98	0.50	0.00	0.50	0.50	0.50	0.50	Test new APC technology by collecting systemwide ridership data for Section 15 reporting and service monitoring.	Woodbury

30 Buses

As of 12/11/98

BUDGET FOR LOAD FACTOR REMEDIATION PLAN

	Description of Action	Implementation Date	Cost by Fiscal Year ($ in millions)						Comments	Resp Party
			1999		2000	2001	2002	2003		
			99 Annual	99 Mid Year						
1V-8	Conduct radio/BOCC pilot program for TRS tracking	Nov-98	0.01	0.26	0.00	0.00	0.00	0.00	Program continuation is predicated upon outcome of the pilot. Phase 1 used 2 TOS (1AM and 1PM) for 14 days; Phase 2 used 3 AM and PM for 10 days and 2 AM and PM for 4 days; phase 3 used 1 AM and PM for 14 days.	Ibarra
IV-9	Dispatch a supervisor to a problem location		0.00	0.00	0.00	0.00	0.00	0.00	Costs for additional TOS are included in FY99 budget and identified in 1.2.2. Success is dependent upon available buses, response times, and available personnel.	Ibarra
	SUBTOTAL		2.38	2.93	8.15	8.15	8.15	8.15		

BUDGET FOR LOAD FACTOR REMEDIATION PLAN

	Description of Action	Implementation Date	Cost by Fiscal Year ($ in millions) 1999		2000	2001	2002	2003	Comments	Resp Party
			99 Annual	99 Mid Year						
PHASE II: IMPROVE OPERATING PERFORMANCE										
V-1	Add service to achieve 1.25 load factor reduction	6/99 (65 buses) 12/99 (65 buses)	0.00	0.00	27.50	27.50	27.50	27.50	Assumes 302,000 revenue service hours costed at $91.21; does not incl inflation 2,323 $/bus	Woodbury/Ibarra
V-6	Issue purchase orders for accelerated bus buys	On-going through 2000	65.00	45.00	146.30	131.40	137.70	69.20		O'Connor
V-7	Complete ethanol conversion	On-going through August 1999.	3.50	0.00	1.50	0.00	0.00	0.00		O'Connor
V-8	Resolve CNG warranty issues	On-going through	0.00	0.00	0.00	0.00	0.00	0.00		O'Connor
V-9	Resolve Las Vegas bus warranty issues	Complete	0.00	0.00	0.00	0.00	0.00	0.00		O'Connor
V-10	Implement Lessons Learned Program	Nov-98	0.00	0.00	0.00	0.00	0.00	0.00		O'Connor
V-11	Equip approximately 20% of the in-service fleet with APC technology.		3.50	0.00	3.50	3.50	3.50	3.50		Woodbury
V-12	Construct CNG fueling facilities (new and upgrade)	Multiple contracts, some are on-going	9.20	0.00	12.40	5.20	2.60	2.10		Stark

BUDGET FOR LOAD FACTOR REMEDIATION PLAN

			Cost by Fiscal Year ($ in millions)							
	Description of Action	**Implementation Date**	**1999**		**2000**	**2001**	**2002**	**2003**	**Comments**	**Resp Party**
			99 Annual	**99 Mid Year**						
V-13	Improve maintenance staffing and training	Jul-98	1.04	1.00	2.90	2.50	2.40	2.40	This includes 8 maintenance instructors at full cost plus materials, outgoing years include an addition of 6 maintenance instructors and potential reimbursement for mechanics.	Hunt
V-15	Improve maintenance supervision	Jul-98	0.01	0.00	0.01	0.01	0.01	0.01	This is the cost of an instructor for 6 (5 days-5hours) sessions for EMS training institute	Hunt
V-16	Improve coach operator manpower planning and training	Jul-98	3.53	0.56	5.20	5.20	5.20	5.20	FY 99 funds 81 positions in the divisions performing disp functions; mid year adds 6 more;training for 147 line instructors; outyears approx 20/yr;$220k for supervisory & operator training	Ibarra
	SUBTOTAL		85.78	46.56	199.31	175.31	178.91	109.91		
	GRAND TOTAL		88.16	49.49	207.46	183.46	187.06	118.06		

IV. PHASE I: INCREASE SCHEDULED SERVICE TO MEET 1.35 LOAD FACTOR

Increase scheduled service to meet 1.35 load factor requirements - Objective #1: Increase Service Capacity

Description of Action: An ongoing point check program provides passenger loading data for 79 bus lines in accordance with a monitoring plan negotiated with the Bus Riders Union in September 1997. The program provides data for the 20 highest ridership bus lines every two weeks, and quarterly data for 59 other bus lines. Point check data is reviewed as collected, and service additions are identified whenever the data review indicates that overcrowding resulted from a lack of sufficient scheduled capacity.

Since the last Service Change Program was implemented on June 28 and July 26, 1998, the MTA has added 20 additional AM Peak buses (through Nov. 30) based upon this review process as shown on the attached chart. The mid-year Reforecast MTA Budget, now under development, makes provision for up to 30 additional peak buses over the course of the current fiscal year.

Expected Result: This program of passenger loading data review, and service augmentation, provides direct mitigation for all instances where the load factor reduction target (currently 1.35 passengers per seat) is exceeded, and it is determined that the exceedance resulted from insufficient scheduled service capacity.

Start Date of Each Activity: This program of active review and mitigation was initiated in July 1998, and will continue for the balance of the Consent Decree time frame.

Performance Measures: The effectiveness of this action will be observed through prevention of recurrences of instances of overcrowding that result from a lack of sufficient scheduled service capacity. MTA Operations Planning and Scheduling will prepare quarterly line profile summaries which discuss the analysis of the point checks on each line. The line profile summaries will be available for distribution to the JWG.

Budget Impact: $2.45 million operating costs in FY99; $4.90 operating costs annually thereafter.

CONSENT DECREE SERVICE ADDITIONS TO MEET 1.35 LOAD FACTOR

Effective Date	Line Group	Out of Division	No. Buses Added					Additional Revenue Hours			
			AM Peak	Base	PM Peak	Sat Max	Sun Max	Daily	Saturday	Sunday	Annual
9/8/98	1-217	7	1					1.4			357.0
8/17/98	2-3-302	7						1.7			433.5
9/8/98	2-3-302	7	1					1.5			382.5
12/3/98	2-3-302	7	2					3.2			816.0
9/8/98	4-304	7	1					10.5			2,677.5
9/8/98	4	7							1.8		93.6
10/26/98	10/11/48	7			2			3.0			765.0
TBD	16-316	1	1		1			5.0			1,275.0
12/3/98	20-21-22-	6-7-10						1.2			306.0
	320-322										
9/8/98	28-27-83	3	2		2			3.4			867.0
	-84-85-328										
9/8/98	33-333	10	1					1.3			331.5
10/26/98	33-333	10	1		2			7.5			1,912.5
11/21/98	33	10				2			10.6		551.2
TBD	33-333	6-10	1					1.5			382.5
TBD	33-333	6-10			1			1.5			382.5
9/8/98	38-71	10			2			6.4			1,632.0
9/8/98	40-42-442	18						1.1			280.5
12/12/98	40-42	10-18				4			25.0		1,300.0
9/8/98	45-46-345	10	1					3.3			841.5
11/28/98	45	10				1			2.3		119.6
9/8/98	55	10			1			1.3			331.5
10/5/98	55	10	1					6.0			1,530.0
9/8/98	60	10			1			4.6			1,173.0
TBD	66	1	3		2			6.0			1,530.0
10/26/98	68	10	2					5.0			1,275.0
9/8/98	78	9						1.4			357.0
10/10/98	92-93	15				1			8.5		442.0
10/24/98	111	5				2			17.8		925.6
10/10/98	163	8-15				2			16.7		868.4
11/23/98	166	8-15	1		1			2.5			637.5
8/23/98	180-181	15					2			16.7	968.6
9/8/98	207-357	18	2					3.0			765.0

CONSENT DECREE SERVICE ADDITIONS TO MEET 1.35 LOAD FACTOR

Effective Date	Line Group	Out of Division	No. Buses Added					Additional Revenue Hours			
			AM Peak	Base	PM Peak	Sat Max	Sun Max	Daily	Saturday	Sunday	Annual
12/9/98	207-357	18	2					7.5			1,912.5
12/9/98	207-357	18			2			7.3			1,861.5
12/9/98	207	18		2				5.7			1,453.5
12/27/98	210-310	5						1.0			255.0
12/13/98	232	91	1					2.0			510.0
1/17/99	232	91						6.5			1,657.5
9/8/98	243	8	1					0.6			153.0
11/30/98	243	8	1					1.6			408.0
9/8/98	251-252	3						2.0			510.0
9/30/98	251-252	3			1			2.0			510.0
9/8/98	260	9			1			1.1			280.5
10/26/98	318	9			1			2.5			637.5
9/8/98	420	8	1					3.0			765.0
9/8/98	561-233	15	1		1			7.1			1,810.5
9/30/98	620	3			1			0.5			127.5
			28	2	22	12	2	134	83	17	39,362.5
	TOTALS - Regular MTA and Contract Operated Service										

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Implement Service Improvemer ts Extraordinary Measures

Implement staged buses program - Objective #3: Improve Schedule Adherence

Description of Action: Strategically deploy a group of buses for the purpose of immediately responding to reported service delays, including mechanical breakdowns, traffic or weather conditions and other operational problems resulting in passenger overloads on high ridership lines.

Expected Result: During the analysis of load factor violations, approximately 10% of the overcrowding was attributable to undetermined or miscellaneous factors. The selected use of staged buses (on lines being actively supervised) could offset the unforeseen events.

Start Date of Each Activity: Staff must negotiate with the UTU to ensure their support for this innovative bus implementation program. Deployment of staged buses will be implemented by February 1999, provided the UTU agrees to support this program. This program will be implemented as a temporary program during FY99 and will be re-evaluated before it is continued into FY00.

Performance Measures: The Bus Operations Control Center (BOCC) will prepare a daily incident report identifying where the staged buses were deployed, by whom, and the effect of the deployment. The reports will be distributed to the division manager for their review and corrective actions. The MTA's goal for schedule adherence is to achieve 90% on-time on-street performance by June 2000.

Budget Impact: $440,000 operating costs in FY99. $880,000 operating costs annually for each year that the program is maintained.

Reassign TOS to on-street supervision and stationary line regulation duties; conduct a pilot project to determine effectiveness- Objective #3: Improve Schedule Adherence

Description of Action: The MTA has created a new job classification (Transportation Division Dispatcher (TDD)) to work in the divisions to handle the more administrative duties of the Transit Operations Supervisor. As the TDD's complete their training, they will be phased in to replace Transit Operations Supervisors (TOS) who will be deployed to on-street supervision and stationary line regulation duties. The MTA intends to completely reassign the TOS' by the end of March 1999.

Review the results of a line regulation demonstration project on Line 33 (Venice Boulevard) to test the validity of schedule manipulation techniques and the effects on the distribution of passenger loads and improving on-time performance.

Expected Result: Previous assessments of increased on-street supervision programs (formerly called the Service Reliability Program) have shown that when a line is being intensively supervised, line operators become more actively involved in identifying problems and suggesting solutions to the problems, passenger loads generally become better distributed, schedule adherence improves, there is a reduction in schedule-related customer complaints, and interdriver cooperation increases (especially for lines operating out of multiple divisions).

Start Date of Each Activity: A pilot program was started on November 18, 1998 on Line 33 which runs from Downtown Los Angeles via Venice Blvd. to the City of Santa Monica. The results of the pilot program reinforced the positive impact of increased on-street supervision by virtually eliminating schedule and other operations violations. Full implementation of this program on various lines system-wide will begin during February 1999.

Performance Measures: Success of the schedule adherence program will be measured through the on-going point check program. The MTA's goal for schedule adherence is to achieve 90% on-street on-time performance by June 2000.

Budget Impact: $2.3 million operating costs for FY99. $3.17 million operating costs annually thereafter.

Ensure UTU labor contract enforcement of on-time performance and ADA regulations; prepare daily reports for operator discipline information - Objective #3: Improve Schedule Adherence

Description of Action: A renewed focus has been placed on timely, appropriate discipline of operations personnel for all rule infractions, including those violations which impact on-time performance and adherence to mandated ADA procedures.

Expected Result: It is expected that the threat of disciplinary action which is progressive and can lead to suspension and termination, will discourage operations personnel from violating rules and procedures. This will lead to improved schedule adherence and service reliability overall.

Start Date of Each Activity: This renewed focus on the assessment of discipline began in earnest during the third quarter of calendar year 1998.

Performance Measures: Disciplinary action is being tracked at each operating division. Data annualized to compare calendar year 1997 to 1998 indicates that disciplinary hearings have increased by 43%, disciplinary suspensions are up by 24% and terminations have increased by 31%. This data will be compared to information provided by schedule checkers and field supervisors to identify a correlation between consistent application of discipline and an improvement in service reliability. The MTA's goal for schedule adherence is to achieve 90% on-street, on-time performance by June 2000.

Budget Impact: No budget impact.

Supplement point check data analysis with additional APC ride checks. Objective #3: Improve Schedule Adherence

Description of Action: Point check data collection efforts will be supplemented with information obtained through a test of Automated Passenger Counting (APC) technology. Between January and June selected buses will be equipped with APC equipment and rotated throughout the entire system for purposes of compiling a comprehensive ridership data base. Between June and September the data will be processed and updated passenger loading and ridership information will be available before the December Shake-up. This information will help to complement the point check program and ensure that capacity increases are properly targeted.

Expected Result: Updated ridership and passenger loading information for the MTA Bus System by September 1999.

Start Date of Each Activity: January 1999

Performance Measures: Updated ridership and passenger loading information for the MTA Bus System by September 1999.

Budget Impact: $500,000 operating costs annually every year.

Conduct radio/BOCC pilot program at Division 9 to use radio system for tracking purpose - Objective #3: Improve Schedule Adherence

Description of Action: The MTA proposes to improve use of the Transit Radio System (TRS) by increasing the training on use of the system, underscoring the importance of the radio system and adhering to strict response times. A pilot will be conducted to ensure maximum efficiency in systemwide implementation and to ensure deployment of TRS available equipment to the lines where it will have the most impact.

The pilot program will be conducted in three phases. Line 76 was selected as the test line for the pilot program. After re-training Operators on TRS radio equipment and assigning TRS-equipped buses to Line 76, a one-week pilot was conducted from September 20-27, 1998. The radio system provides central control with "records" which measure the in-service time that a coach reaches the time point. Phase two of the test will involve the deployment of dedicated field supervisors and phase three will involve active line management by central control personnel.

Expected Result: This program will allow the MTA to achieve the same benefits as increased field supervision through the use of central control staff. A single Transit Operations Supervisor in central control, with a workable communications and control system, can be as effective with respect to line management as three field supervisors.

Start Date of Each Activity: Phase two will commence in January 1999. Phase three will commence in February 1999.

Performance Measures: Data provided by schedule checkers, field supervisors and central control will be used to analyze on-street, on-time performance improvements. The MTA's goal for schedule adherence is to achieve 90% on-street, on-time performance by June 2000.

Budget Impact: $270,000 operating costs in FY99.

Dispatch a supervisor to a location with potential overcrowding - Objective #3: Improve Schedule Adherence

Description of Action: Bus Operations Central Control procedures currently call for the assignment of an available supervisor to respond to passenger overload reports from Operators. The responding supervisor assesses the situation and initiates actions to check for the cause of the overload. However, the scarcity of supervisors has made this procedure impossible to effectuate. The MTA proposes that the increase of supervisors designated for the other action items identified in the Load Factor Reduction Plan will enable the Bus Operations Central Control staff to dispatch supervisors, as required.

Expected Result: This will identify whether the overload problem is schedule-related or operator-related. This will lead to the elimination of many running-time and capacity problems.

Start Date of Each Activity: February 1999. This effort will prove more effective with the introduction of more supervisors in the field and the establishment of the "staged bus" program.

Performance Measures: Follow-up schedule checks and data collected from field supervisors will identify whether problems were effectively eliminated. The MTA's goal for schedule adherence is to achieve 90% on-street on-time performance by June 2000.

Budget Impact: No budget impact.

V. PHASE II: IMPROVE OPERATING PERFORMANCE

Add Service to Achieve a 1.25 Load Factor - Objective #1 Increase Service Capacity

Description of Action: The MTA conducted a line by line analysis of historical point check data using sliding 20-minute (peak) and hourly (off-peak) time windows to determine the additional scheduled service requirements to achieve a 1.25 load factor. While this load factor represents an average of 53.75 passenger per seat, based on a 43 seat bus, the analysis identified the service requirements to achieve an average of passengers per seat in all time periods (the equivalent of a 1.23 load factor).

The resulting service requirements are identified by bus line in the chart on the following pages. The total additional service required is 130 AM Peak buses (the time of day with the highest overall service requirement), and varying amounts of additional service during other time periods. The projected additional revenue service hours are approximately 302,000 annually. The added service is proposed to be implemented in two equal installments in June 1999, and December 1999, corresponding with the next two planned Service Change Programs. This will afford an opportunity for monitoring and adjustment of service for six months prior to the effective date by which the 1.25 Load Factor Reduction Target must be achieved (June 30, 2000). Phased implementation will also permit hiring and training of additional operators and support personnel.

Expected Result: The identified additional service will avoid instances where the 1.25 Load Factor Reduction Target is exceeded because of insufficient scheduled service capacity.

Start Date of Each Activity: The additional service will be added, as follows:

Date	# of AM Peak Buses	Added Annual Rev. Svc. Hours
June 1999	66	165,000
December 1999	64	137,000

Performance Measures: The effectiveness of this action should be observed through prevention of recurrences of instances of overcrowding that result from a lack of sufficient scheduled service capacity.

Budget Impact: No impact in FY99. $27.5 million operating costs annually thereafter.

ESTIMATED ADDITIONAL SCHEDULED BUSES TO ACHIEVE 1.25 LOAD FACTOR
(June 1999)

			No. of Buses to be Added						Est. Additional Revenue Hours			
Line	Routes	Div.	AM	Base	PM	Sat.	Sun.		DX	Sat	Sun	Annual
1	217	7	3		3				18			4,590
2	3, 302	7										-
2	3, 302	10	4		4				24			6,120
4	304	6										-
4	304	7										-
4	304	10	6	3	6				54			13,770
14	37	7	3		3				18			4,590
16	316	1	2		2				12			3,060
16	316	7	2		2				12			3,060
18	318	1	1	1	1				12			3,060
18	318	9	1	1	1				12			3,060
20	21, 22, 320,	6										-
20	21, 22, 320,	7										-
20	21, 22, 320,	10	5		3				24			6,120
26	51	2										-
28	27, 83, 84,	3	2	2	2	1	1		24	12	12	7,440
28	27, 83, 84,	7	2	2	3	1	1		27	12	12	8,205
30	31	1	2	2	2				24			6,120
33	333	6										-
33	333	10	4		4	4	4		24	48	48	11,400
40	42, 442	10	1		1	1			6	12		2,154
40	42, 442	18	1		1	1			6	12		2,154
45	46, 345	10	4		4				24			6,120
60		10	3		2	3	3		15	36	36	7,785
60		18	2		3				15			3,825
66		1	4	4	4				48			12,240
204	354	3	1		1				6			1,530
204	354	5	1		1				6			1,530
207	357	5	3	3	3	3	3		36	36	36	13,140
207	357	18	3	3	3	3	3		36	36	36	13,140
210	310	5		1	1				9			2,295
210	310	18		1	1				9			2,295
251	252	3	2	1	2	1			18	24	12	6,534
251	252	18	2	1	2	1			18	24	12	6,534
420		2	1		1				6			1,530
420		15	1		1				6			1,530
TOTAL BUSES NEEDED:			66	25	67	19	15		549	252	204	164,931
The above estimated buses and revenue hours are subject to refinement prior to implementation.												

ESTIMATED ADDITIONAL SCHEDULED BUSES TO ACHIEVE 1.25 LOAD FACTOR
(December 1999)

				No. of Buses to be Added					Est. Additional Revenue Hours			
Line	Routes	Div.	AM	Base	PM	Sat.	Sun.	DX	Sat	Sun	Annual
10	11, 48	7	1		1			6			1,530
38	71	10	4		5			27			6,885
53		18	1					3			765
55		10	5	4	5			54			13,770
56		2									-
65		2									-
68		10	6		4			30			7,650
70		9	3		3	2	1	18	24	12	6,534
76		9			1			3			765
78	79, 378, 3	9	2	1				12			3,060
81		18		1				6			1,530
90	91	15					1			12	696
92	93, 410	15									-
94	394	3	1					3			765
96		92									-
102		2									-
104	128	92	1					3			765
105		2	3		3			18			4,590
107		5									-
108		5	1	2	1			18			4,590
110		5	2	1	2	1		18	12		5,214
111	311	5				2			24		1,248
112		5									-
114		5									-
115	315	5	2	1	2			18			4,590
117		18									-
119	126	18									-
120	121	18									-
124		18									-
125		91			2			6			1,530
127		18									-
130		91			1			3			765
152		8	1					3			765
154		15									-
158		15									-
161		8									-
163		8	1	1	1			12			3,060
165	164	8	1		1	2		6	24		2,778
165	164	15	1		1	2		6	24		2,778
166		8			1			3			765
166		15	1		1			6			1,530

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ESTIMATED ADDITIONAL SCHEDULED BUSES TO ACHIEVE 1.25 LOAD FACTOR
(December 1999)

			No. of Buses to be Added					Est. Additional Revenue Hours			
Line	Routes	Div.	AM	Base	PM	Sat.	Sun.	DX	Sat	Sun	Annual
167		92	1					3			765
168		8									-
169		15									-
170		9									-
175		3	1		1			6			1,530
176		3									-
177		92									-
180	181	3	2	2	2			24			6,120
188		9									-
200		2	3		5			24			6,120
201		3									-
202		18									-
205		91									-
206		3	1		1			6			1,530
206		5	1		1			6			1,530
209		5									-
211	215	18	1		1			6			1,530
212		5	1		1			6			1,530
218		94									-
220		7									-
225	226	91									-
230	239	15	1	1	1			12			3,060
232		91	2		3			15			3,825
234	183	15	1		1			6			1,530
236		8									-
243		8									-
245		8									-
250	253	10									-
254		92									-
255		3									-
256		92									-
259	258	9									-
260		9	2	1	2			18			4,590
260		18	1		1			6			1,530
262		9									-
264		9									-
265	275	18									-
266		91	1					3			765
267		9									-
268		9									-
270		91									-

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ESTIMATED ADDITIONAL SCHEDULED BUSES TO ACHIEVE 1.25 LOAD FACTOR
(December 1999)

				No. of Buses to be Added					Est. Additional Revenue Hours			
Line	Routes	Div.	AM	Base	PM	Sat.	Sun.	DX	Sat	Sun	Annual
362		1									-
401	402	3									-
418		8									-
424	425	8	1		1			6			1,530
426		8									-
427		8									-
429		7									-
434		6	2		2			12			3,060
436		6									-
439		18									-
444		18									-
445		18									-
446	447	18	1					3			765
460		1									-
466		9									-
471		9									-
483	485	3									-
484		9									-
487	491	9									-
489		9									-
490		9									-
497		9									-
522		8	1		2			9			2,295
550		18									-
561	233	15	1		2	1	1	9	12	12	3,615
576		1									-
603		94	2	3	5	3	3	24	36	36	10,080
605		94									-
620		10			1			3			765
TOTAL BUSES NEEDED:			64	18	68	13	6	489	156	72	136,983

The above estimated buses and revenue hours are subject to refinement prior to implementation.

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Improve Equipment Reliability

Issue purchase orders for accelerated bus procurement (refer to attached spreadsheet for status of existing bus purchase contracts) Objective #2: Improve Equipment Reliability

Description of Action: At this time, the MTA has initiated contracts for new buses with three bus manufacturers: Neoplan USA of Lamar, CO; New Flyer of America, of Crookston, MN, and NABI Inc., of Anniston, AB. To date, the MTA has received all 300 buses from the current Neoplan contract, and we are negotiating for delivery of an additional 100 buses by the end of FY99. Note: 294 Neoplan CNGs were received under previous contracts.

Expected Result: The MTA will lower the average age of the fleet from the current 9.5 years to 6 years by the end of FY00. This will result in overall improvements in fleet reliability.

Start Date of Each Activity: The MTA will begin receiving 223 buses from New Flyer between August and December 1999, and we are negotiating for an additional 223 for delivery in FY01. Last month the MTA executed a contract with NABI, with 215 buses scheduled for delivery between January and May '00. We will forward copies of these executed contracts to the JWG.

Performance Measures: Procurement completes a monthly progress report to the Board of Directors advising them of the status of bus vehicle procurement issues and delivery schedule progress.

Budget Impact: $110 million capital impact in FY99. See budget chart for annual expenses.

Complete conversion of Ethanol buses to Diesel - Objective #2: Improve Equipment Reliability

Description of Action: A specific bus sub-fleet of note is the 333 alcohol buses. In an effort to improve performance and reliability of this sub-fleet, the MTA Board approved the conversion of this sub-fleet to diesel engines. Adding 333 reliable buses to the MTA's active fleet will greatly improve service reliability.

The MTA has a contract with Detroit Diesel Corporation (DDC) to convert 15 buses per month from alcohol fuel to a more reliable diesel configuration.

Expected Result: The MTA will regain use of 333 alcohol fueled buses which have proven to be too unreliable to use in MTA service.

Start Date of Each Activity: Nine vehicles were converted during 1997 as test prototypes to ensure that the conversion program would be technically feasible. The conversion of the remaining 324 vehicles began in July 1998. A total of 40 buses have been completed to date. At the current production rate, the remaining 284 buses will take 19 months to complete.

MTA staff is negotiating with DDC to increase this conversion rate to 30 vehicles per month, and will be presenting this option to the MTA Board in January 1999. DDC has requested $4,000 per bus for each bus over 20 per month to offset overtime and weekend work requirements. At the accelerated conversion rate, the remaining 284 buses can be completed in 10 months, or by August/Sept. 1999.

Performance Measures: Procurement completes a monthly progress report to the Board of Directors advising them of the status of bus vehicle procurement issues and delivery schedule progress.

Budget Impact: $3.5 million operating costs in FY99. $1.5 million operating costs in FY00.

Resolve all CNG warranty issues with Neoplan - Objective #2: Improve Equipment Reliability

Description of Action: The MTA has received approximately 594 out of 694 new CNG buses manufactured by Neoplan, USA. All Neoplan CNG buses have experienced a significant number of mechanical problems. Warranted defects have been processed and are being corrected by Neoplan.

Expected Result: Our goal is to improve reliability of these vehicles as measured by mean miles between mechanical failures. The new fleet is currently in active service, however, the MTA is seeking to improve overall fleet reliability.

Start Date of Each Activity: Neoplan continues to make progress at correcting outstanding warranty issues with their CNG buses. Of the 33 items identified last April for corrective actions, Neoplan has completed corrective action on the majority of the "highest" priority items fleetwide. MTA staff anticipates that all high priority items should be corrected by December 31, 1998, and the majority of other items are addressed as well.

Performance Measures: Procurement completes a monthly progress report to the Board of Directors advising them of the status of bus vehicle procurement issues and delivery schedule progress.

Budget Impact: No budget impact.

Resolve all Las Vegas low floor buses warranty issues - Objective #2: Improve Equipment Reliability

Description of Action: In August 1998, the MTA purchased 20 New Flyer low floor buses from ATE/Vancom of Las Vegas, Nevada. The bus front axle had a mechanical defect in the front axle/steering assembly. MTA worked with the vehicle manufacturer to resolve outstanding problems with these vehicles.

Expected Result: The MTA purchased these 20 buses to improve overall fleet reliability.

Start Date of Each Activity: As of November 1998, New Flyer and Rockwell/Meritor (the axle manufacturer) have completed corrective repairs all 20 buses. These buses were placed in service November 11, 1998.

Performance Measures: Action completed.

Budget Impact: No budget impact.

Implement lessons learned program to prevent issues with future bus deliveries - Objective #2: Improve Equipment Reliability

Description of Action: Equipment Engineering staff has taken two steps to implement a "lessons learned" program with future bus buys. First, a single Project Manager for each bus buy is being appointed for each bus buy contract. In addition, a separate "Fleet-wide" project manager has been assigned to focus on resolving technical/engineering for buses that are no longer covered by manufacturer's warranties.

Expected Result: This will ensure that there is a single point of contact for all issues with the new bus fleet contracts, from the point of contract inception until the conclusion of the warranty period. This heightened level of specialization within the Equipment Engineering group should foster increased diligence and attention to issues with future bus buy contracts.

Start Date of Each Activity: Ongoing.

Performance Measures: The standard that has been set is for each new vehicle to achieve acceptable performance within 90 days of delivery of the vehicle.

Budget Impact: No budget impact.

Equip approximately 20% of the in-service fleet with Automatic Passenger Counter (APC) technology.
Objective #3: Improve Schedule Adherence

Description of Action: The demonstration project to evaluate the various Automated Passenger Counting (APC) technologies available from different vendors is nearing completion. Based upon the results of evaluation, an APC system will be procured and installed in approximately 20 percent of the buses in the fleet to expand on-going data collection capabilities. APC can be used to collect ridership data for all or a portion of a line, real time schedule data and can also be used to collect passenger loading information. The APC implementation will be integrated with other improvements in the bus communication technologies, including the installation of an automated vehicle location system and an upgrade of the bus radio system. Initially the APC system may need to be developed as a stand alone system or as part of the "Smart Bus" procurement.

Expected Result: Increased availability of ridership and passenger loading data.

Start Date of Each Activity: FY 2000.

Performance Measures: The APC technology is installed and operational in 20 percent of the fleet by June 2000.

Budget Impact: $3.5 million operating costs each year.

Construct CNG fueling f :cilities and other infrastructure improvements - Objective #2: Improve Equipment Reliability

Description of Action: The purchase of 800 new CNG buses requires the MTA to construct new fueling facilities at each of the operating divisions. The funds for construction of these facilities was programmed in the recent RTAA Board adoption and has been included in the MTA Capital Improvement Plan.

Expected Results: Construction of the fueling facilities will ensure that the MTA has adequate fueling capacity for an expanded CNG fleet.

Start Date of Each Activity: One division is currently under construction and will be completed by June 1999. A second division is being considered for a Public/Private Partnership and is expected to be operational by June 2000.

Performance Measures: The Facilities Engineering department completes quarterly reports on the progress of the construction projects for the Federal Transit Administration.

Budget Impact: $9.2 million capital costs in FY99. See budget chart for annual expenses.

Improve Maintenance Staffing and Training - Objective #2: Improve Equipment Reliability

Description of Action: The evaluation of causes for load factor violations indicates that one cause for overcrowding is due to service cancellations. One cause for service cancellations is due to no available coach to complete the scheduled run. In order to improve the coach availability on a daily basis and thereby ensure service reliability, the MTA proposes to implement the following actions:

- Hire mechanics and service attendants to ensure adequate backfill for long-term leave.
- Implement the FY99 maintenance instruction field training program. The FY99 maintenance instruction field training program provides individualized and division-specific training at each operating division.
- Increase vendor-provided training to mechanics, supervisors, and instructors. Vendor provided training is designed to ensure that mechanics are learning the most up-to-date maintenance procedures as required by new equipment receipts.
- Pursue computer-based training programs that mechanics can pursue to enhance their skills. Computerized systems will increase efficiency and staff productivity.
- Begin the testing program for the Personnel Qualification Standards (PQS). The Personnel Qualification Standards program assists management to evaluate performance and identify training needs of their staff.
- Fill new job classifications as approved in the labor agreement. The new classifications of Master Mechanic and Mechanic D will provide a performance-based promotion for maintenance personnel.

Expected Results: The expected results of the above actions is to reduce service cancellations that occur as a result of unavailable coaches. Each division will be staffed with an adequate number of mechanics and service attendants who will be better trained to perform their jobs.

Improve Maintenance Staffing and Training - Objective #2: Improve Equipment Reliability (Continued)

Start Date of Each Activity:

- Hiring mechanics and service attendants is an ongoing process. Increased hiring for FY99 was initiated in July 1998 and will continue all vacancies are filled.
- The maintenance instruction field training program was initiated in July 1998 and will continue throughout the year.
- Vendor provided maintenance training began in November 1998; classes will continue throughout the year.
- Training for use the new computerized systems will begin during FY00 and continue as new buses are put into service.
- Final development of the PQS began in July 1998; implementation is scheduled in January 1999.
- Implementation of the new jobs will begin in April 1999.

Performance Measures:

- Increase miles between road calls to 2,000 by June 30, 1999
- Improve on-time performance to 99 percent by June 30,1999
- Reduce past due critical PMP ratio by 0.5 by June 30, 1999
- Increase employee productivity by up to 2 percent as measured by the employee's actual job times in relation to performance standards
- Maintain overtime usage to budget limits

Budget Impact: $2.04 million operating costs for FY 99. $2.9 million operating costs for FY00. $2.5 million operating costs for FY01. $2.4 million operating costs each year thereafter.

Improve Maintenance Supervision - Objective #2: Improve Equipment Reliability

Description of Action: Senior Supervisors and Equipment Maintenance Supervisors play a vital role in resolving equipment reliability problems. The supervisors plan the daily maintenance activities, provide guidance and direction to mechanics and service attendants, and ensure that buses are properly maintained and available for rollout. The MTA proposes to improve the overall maintenance supervision by ensuring that all vacancies are filled promptly and providing effective skills training for the supervisors.

Expected Result: Filling all vacancies promptly will provide 24-hour shift coverage at the divisions. As the equipment that the maintenance employees are required to repair and maintain changes and becomes more complex, it is critical that the supervisors remain familiar with the technical aspects of the mechanic's job so that they can provide basic on-the-job training and problem solving techniques to the mechanics as needed. In addition to technical skills training, quarterly supervisory training on teamwork, conflict resolution, project management, workplace safety and worker's compensation will assist the supervisors to increase productivity through improved morale and camaraderie at the divisions.

Start Date of Each Activity: The recruitment process for the EMS and Sr. EMS positions began in August and November 1998, respectively. The MTA anticipates that all vacant positions will be filled by May 1, 1999. The training classes began in the first quarter of FY99.

Performance Measures:

- Eliminate all Sr. EMS and EMS vacancies
- Develop and maintain a certified candidate pool for the Sr. EMS and EMS positions
- Increase employee productivity by up to 2 percent as measured by the employee's actual job times in relation to performance standards.
- Increase miles between road calls to 2,000 by June 30, 1999
- Improve on-time performance to 99 percent by June 30, 1999
- Maintain overtime usage to budget limits

Budget Impact: $$10,000 operating costs annually.

Improve Coach Operator Manpower Planning and Training - Objective #4 Increase Coach Operator Availability

Description of Action: The evaluation of causes for load factor violations indicates that one cause for overcrowding is due to service cancellations. One cause for service cancellations is due to an inadequate number of trained operators available to complete the scheduled run. In order to maintain qualified operator manpower to ensure service reliability, the MTA proposes to implement the following actions:

- Provide forecasting to ensure trained operators are available for service 100% of the time.
- Implement a revised methodology for ensuring adequate manpower. Currently the method of assigning operators to the Divisions is to apply a systemwide number of operators per assignment. The revised method will treat each division independently.
- Strengthen operator hiring practices to identify a personality profile standard.
- Strengthen operator training regarding customer service through "Strategies for Dealing with Difficult People" training program and Operator Line Instructors/Mentors.
- Improve the "extra-board" assignment of operators through an intensive "back-to-basics" training program designed to maximize operator time and adhere to state laws governing maximum driving time.
- Develop a cap or standard for vacation approvals so that each division is fully staffed at all times.
- Improve communications between in-service operators and Bus Operations Central Control, by using the Transit Radio System and additional part-time radio dispatchers.
- Develop a close-working relationship with the City of Los Angeles department of permits to identify traffic management issues prior to the event.

Expected Results: The above actions will reduce the possibility for service cancellations caused by operator unavailability. Operators will be hired in an expeditious manner, will be better qualified to do their job, and will receive adequate training to provide effective customer service.

Coach Operator Manpower Planning and Training - Objective #4 Increase Coach Operator Availability (Continued)

Start Date of Each Activity:

- The annual operator hiring forecast for FY00 will be available in March 1999.
- The analysis of division specific operator to assignment ratio will be complete and available to the JWG by May 1, 1999.
- A joint task to improve operator hiring practices was formed in October in 1998 and will meet ongoing.
- The Line Instruction/Mentor program will begin in January 1999 and the "Strategies for Dealing with Difficult People" program will begin in February 1999.
- "Back to Basics" training at the divisions is on-going with specific extra-board training commencing in February 1999.
- Vacation caps will be set at all operating divisions during the last quarter of the current fiscal year.

Performance Measures: Transit Operations publishes daily reports which detail service cancellations caused by no available operator. This information is summarized monthly and presented to the MTA Board.

Budget Impact: $4.09 million operating costs for FY99. $5.2 millon operating costs for every year thereafter.