



**Customer Services, Operations, and Safety Committee**

**Board Information Item III**

**March 26, 2009**

**Operational Performance**

Washington Metropolitan Area Transit Authority  
**Board Action/Information Summary**

<input type="checkbox"/> Action <input checked="" type="checkbox"/> Information	MEAD Number:	Resolution: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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**TITLE:**

Operational Performance

**PURPOSE:**

To provide the Committee with monthly operational highlights and system performance trends for FY09.

**DESCRIPTION:**

Information contains operational highlights that have occurred during the first seven months of FY09 in the areas of on-time performance and reliability for Metrorail, Metrobus, MetroAccess and Vertical Transportation and rail car door malfunctions resulting in offloads.

**FUNDING IMPACT:**

No impact on funding.

**RECOMMENDATION:**

None



# Operational Performance

*Presented to the Board of Directors:*

**Customer Service, Operations, and Safety  
Committee**

March 26, 2009

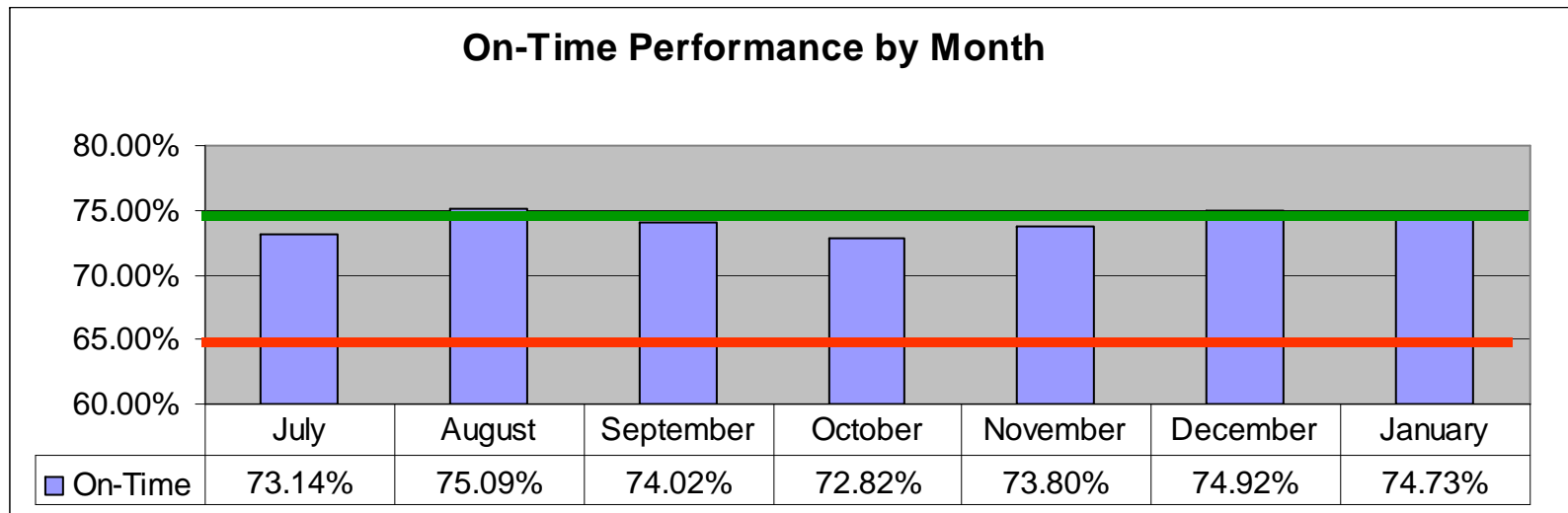




# Bus On-Time Performance

**DEFINITION** – Measurement of time throughout the day (from beginning to end of service) for all routes by capturing the data recorded by the CAD/AVL whenever a bus encounters a time point. Parameters used by other agencies have a broad range and use selected time points vs Metro using all time points.

**CALCULATION** – Difference between scheduled time and actual time arriving at a time point based on 2 min early and 7 min late parameters.



 High Average – 75%

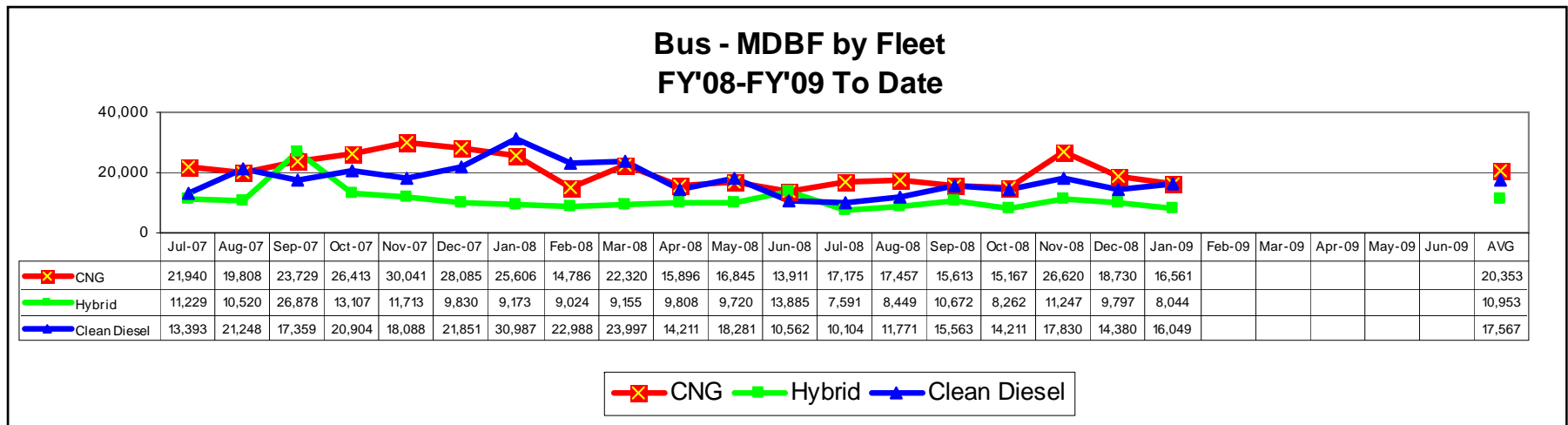
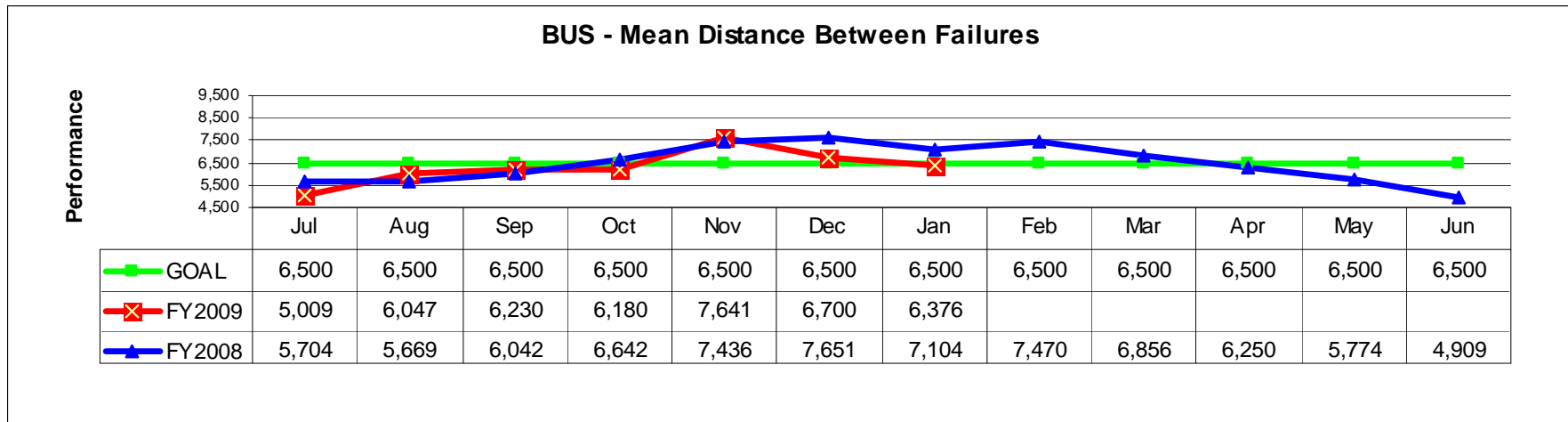
 Low Average – 65%



# Bus Mean Distance Between Failures

**DEFINITION** – This measure identifies the number of miles traveled before a mechanical breakdown for the entire bus fleet

**CALCULATION** – Number of failures/miles = Mean Distance Between Failures. **FY 2009 YTD – 6,211**

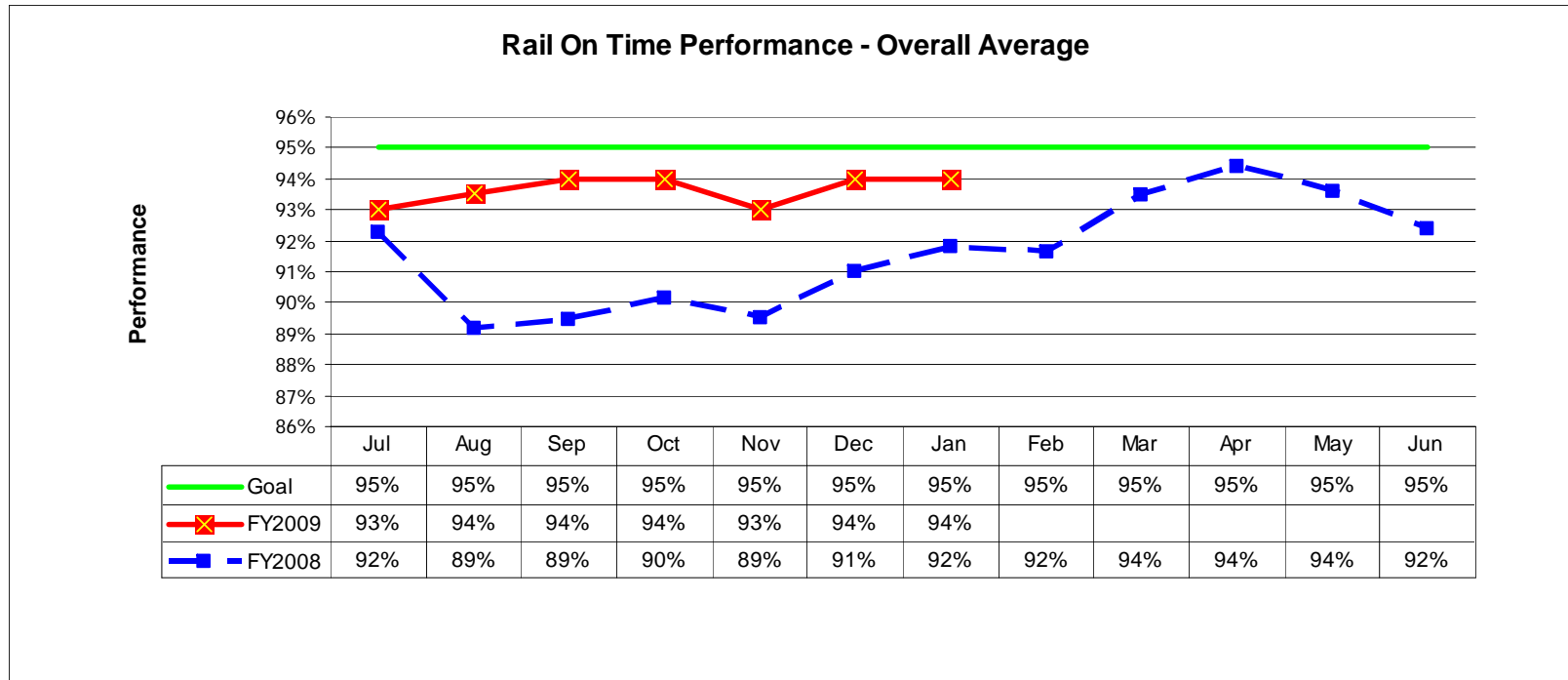




# Rail On-Time Performance Summary

**DEFINITION** – Measured during peak service (AM/PM), identifying percentage of trains on each line **end-to-end** within a 2 minute headway deviation and measured mid-day non-peak and late night non-peak within a 50% headway deviation. This measures how well we are providing service.

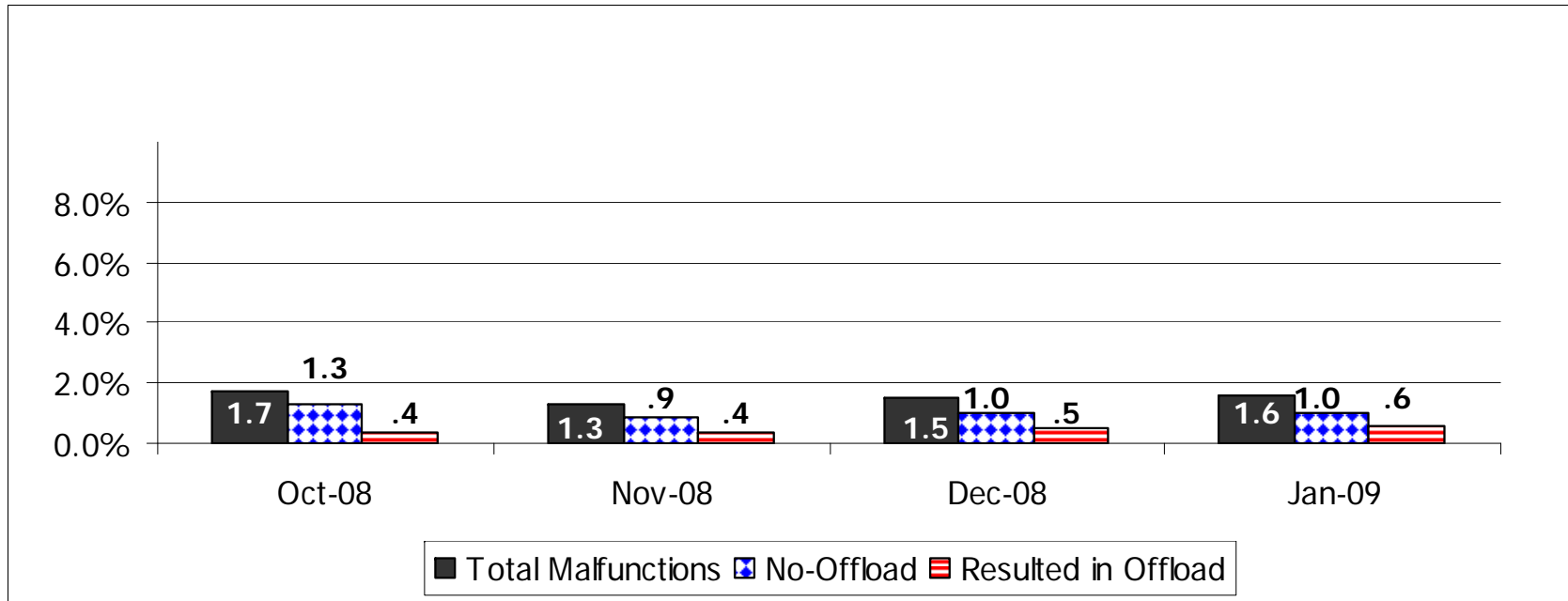
**CALCULATION** – (Number of Metrorail station arrivals – number of headways with >2 minute deviation or 50% headway deviation) / number of Metrorail station arrivals = Metrorail On-Time Performance End-to-End.



Red Line = 94%   Blue Line = 91%   Orange Line = 94%   Green Line = 94%   Yellow Line = 94%



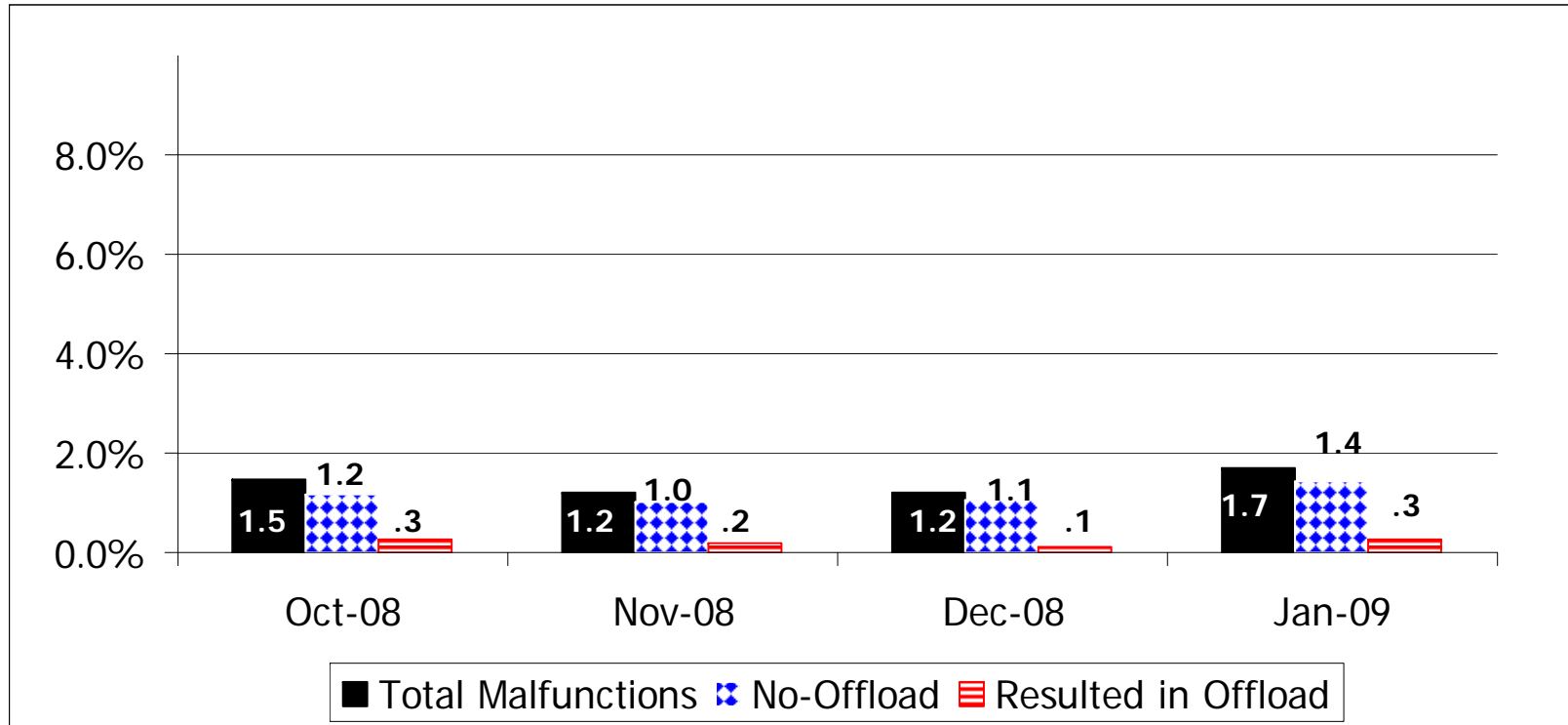
# Rail Car Door Malfunctions – Peak Percentage of Trains Operated



262 trains per day during peak period x average 21 weekdays = 5,502 trains per month



# Rail Car Door Malfunctions – Non-Peak Percentage of Trains Operated



130 trains per day during non-peak period x average 21 weekdays = 2,730 trains per month

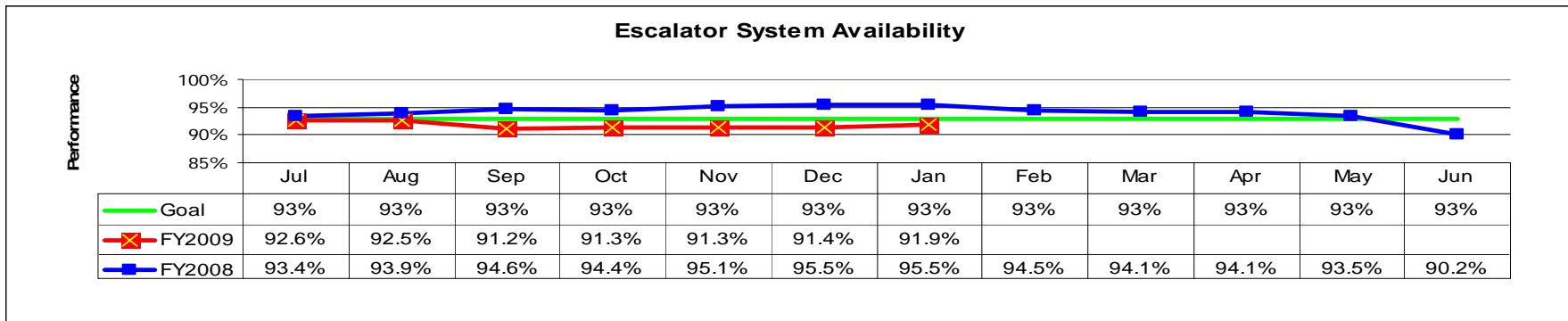




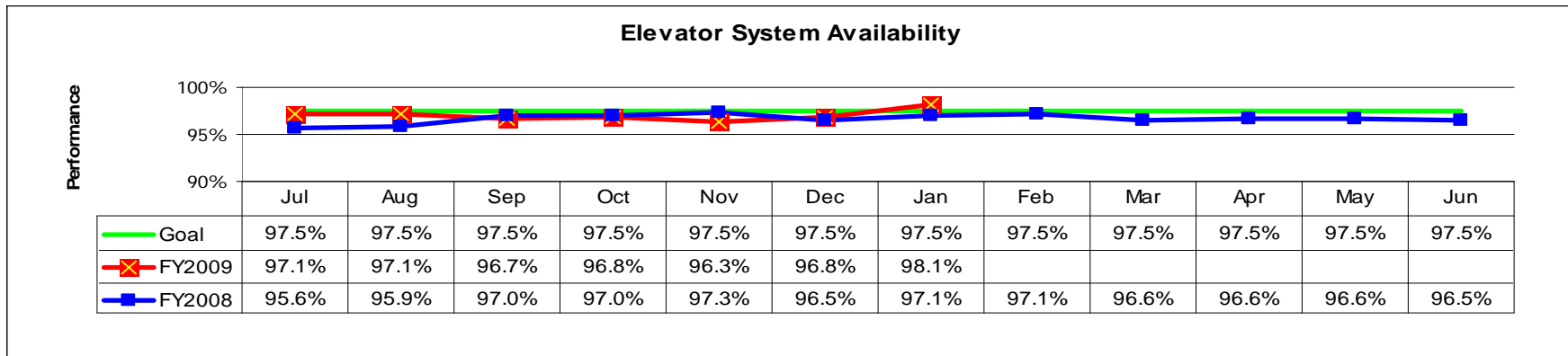
# Escalators and Elevators Availability

**DEFINITION** – Percentage of time that the escalator or elevator system is available for service.

**CALCULATION** – Hours achieved divided by operating hours. Hours achieved = operating hours - (hours out of service both scheduled and unscheduled). Operating hours = revenue hours \* number of units.



Escalator Availability AM peak is 91.7%; PM peak is 92.2%; mid-day non-peak 91.6%; late night non-peak 92.1%



Elevator Availability AM peak is 98.1%; PM peak is 98.2%; mid-day non-peak 98.1%; late night non-peak 98.2%

588 escalators and 271 elevators



# Escalators November to January Top 12

**DEFINITION** – Top 12 Escalators with the lowest availability for the past 90 days November 2008 thru January 2009.

**CALCULATION** – Ranked availability.

Nov - Jan 2009 Escalator		System Availability	OOS Count	OOS Hours	Details	Status	Redundancy
STATION NAME	UNIT						
COLUMBIA HEIGHTS	#4	0.00%	2	1,775.00	Replace Bull gear & drive chain	Out of Service	1 of 2 Entrance
CAPITOL HEIGHTS	#4	18.85%	9	1,381.44	Walker for adjacent CIP	Returned to Service	1 of 2 Mezz
CAPITOL SOUTH	#3	22.60%	10	1,373.78	Pinion gear replacement	Returned to Service	1 of 3 Entrance
GALLERY PLACE	#12	24.31%	9	1,344.33	Remote monitoring installation	Returned to Service	1 of 2 Platform
SMITHSONIAN	#3	43.93%	12	995.39	Brake fabrication & replacement	Returned to Service	1 of 3 Entrance
NAVY YARD	#1	44.35%	11	987.78	Replace stub shaft	Returned to Service	1 of 3 Entrance
FOGGY BOTTOM	#2	44.86%	11	978.68	Replace step chain	Returned to Service	1 of 3 Entrance
PENTAGON CITY	#9	44.90%	16	978.05	Replace reducer	Returned to Service	1 of 3 Mezz
FOGGY BOTTOM	#3	45.34%	18	970.32	Replaced step chain	Out of Service	1 of 3 Entrance
NEW YORK AVE.	#1	45.78%	18	962.47	Brake fabrication & replacement	Returned to Service	1 of 2 Platform
METRO CENTER	#6	49.58%	14	894.91	Handrail replacement	Returned to Service	1 of 4 Platform
NAVY YARD	#3	49.96%	24	888.94	Replace rack, axle, & stub shaft	Out of Service	1 of 3 Entrance

 Repeater

FY09 Goal: 93%



# Elevators November to January Top 12

**DEFINITION** – Top 12 Elevators with the most lowest availability November 2008 thru January 2009.

**CALCULATION** – Ranked by availability.

Nov - Jan 2009 Elevator		System Availability	OOS Count	OOS Hours	Details	Status	Redundancy
STATION NAME	UNIT						
NAVY YARD	#2	57.15%	2	760.63	Replace packing	Returned to Service	Single mezz
PRINCE GEORGE'S PLAZA	#4	69.98%	3	532.88	Replace intercom	Returned to Service	1 of 1 ped bridge
PRINCE GEORGE'S PLAZA	#5	73.62%	6	468.27	Replace intercom	Returned to Service	1 of 1 ped bridge
MORGAN BLVD.	#1	81.50%	5	328.37	Replace packing	Returned to Service	1 of 1 mezz
PENTAGON	#4	84.08%	3	282.63	Replaced SMC mother board	Returned to Service	1 of 2 entrance
VAN NESS	#2	85.28%	5	261.28	Pit flooded & replaced coils in valve pump	Returned to Service	1 of 1 mezz
VIENNA	#4	87.50%	3	221.93	Replaced digital pointer	Returned to Service	1 of 3 garage
FRIENDSHIP HEIGHTS	#4	87.65%	7	219.16	Replaced hoist rope	Returned to Service	1 of 4 mezz
BETHESDA	#1	88.09%	7	211.34	Replaced motor brushes, resistors & capacitors	Returned to Service	1 of 1 mezz
WOODLEY PARK	#1	88.43%	4	205.46	DC Inspection	Returned to Service	1 of 1 mezz
DEANWOOD	#1	89.20%	3	191.78	Replaced cab glass and seals	Returned to Service	1 of 1 mezz
VAN NESS	#1	90.88%	10	161.95	Repaired sheave	Returned to Service	1 of 1 mezz

 Repeater

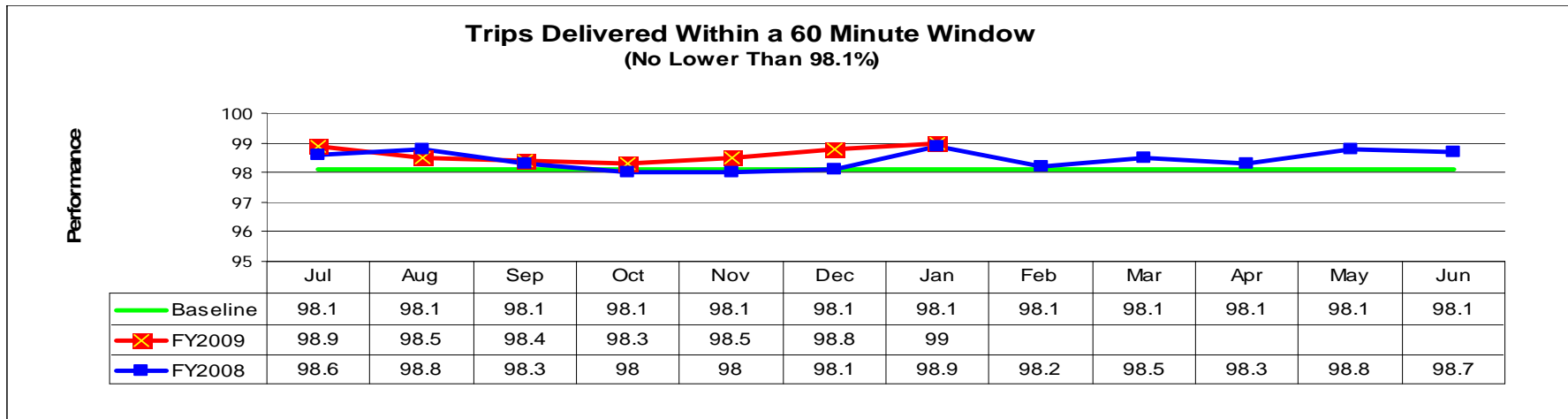
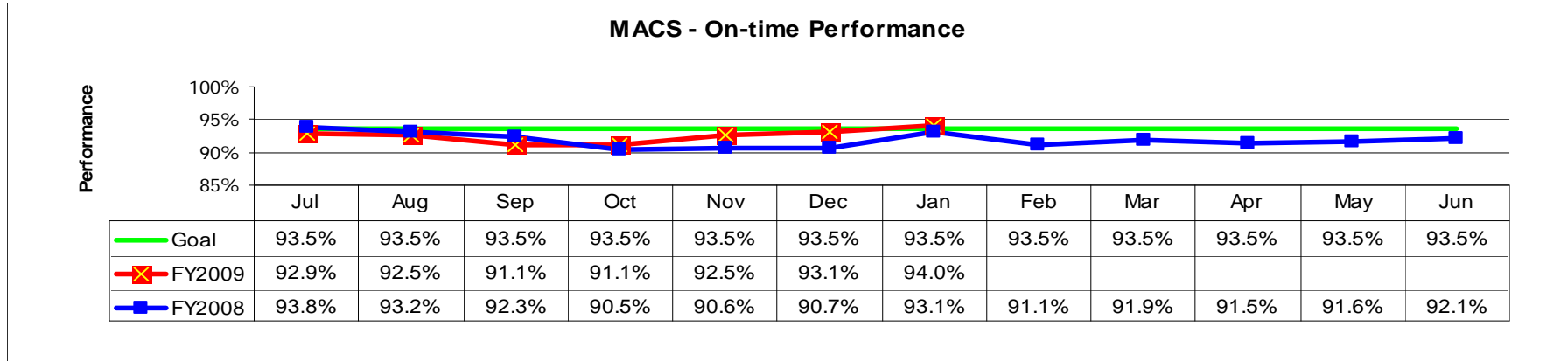
FY09 Goal: 97.5%



# MetroAccess

**DEFINITION** – Percentage of on-time pickup within a 30-minute window.

**CALCULATION** – (Total on-time trips including “no shows” to which were initially on-time/sum of total completed trips (including “no shows” to which we were initially late) and missed trips = MetroAccess On-Time Performance.



**DEFINITION** – Percentage of trips delivered within a 60 minute window.

**CALCULATION** – Percentage of trips delivered within a 60 minute window.



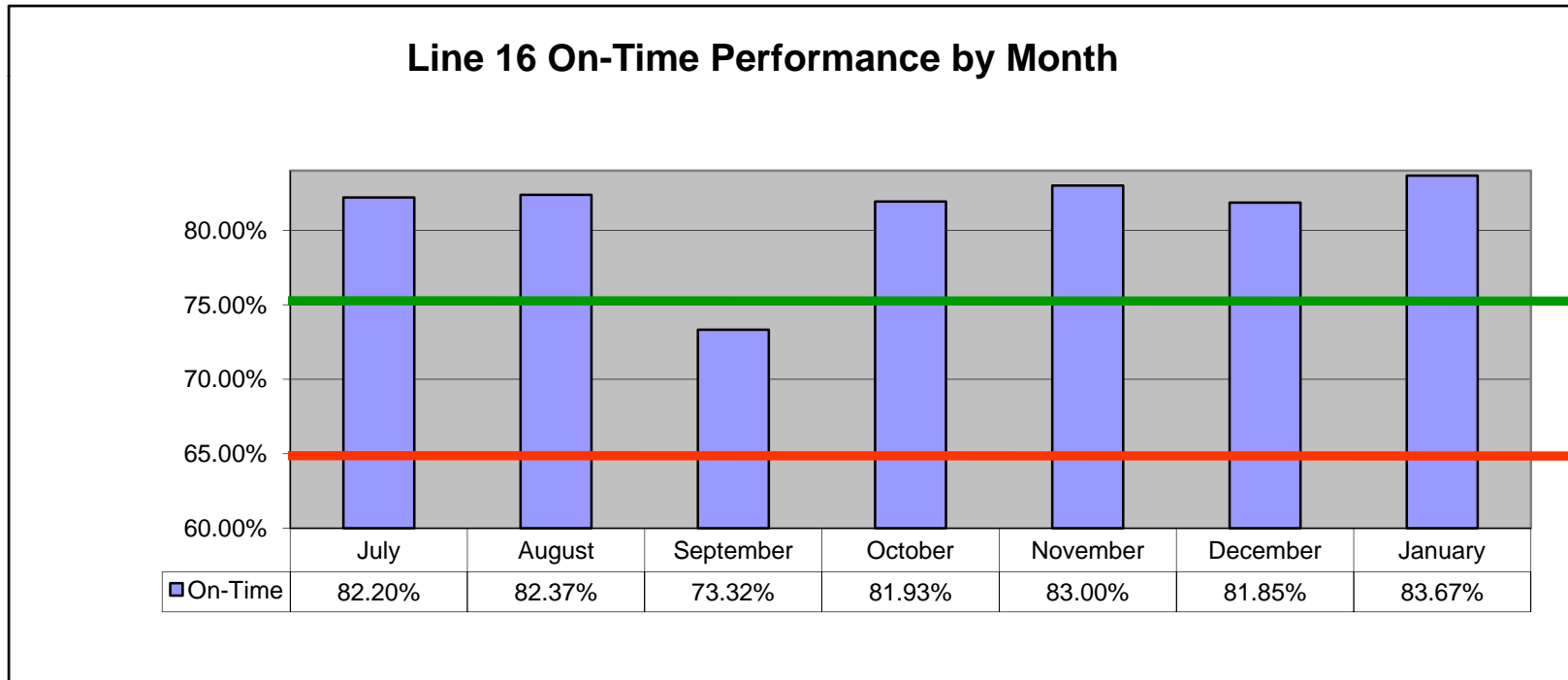
# Appendix



# Bus On-Time Performance

**DEFINITION** – Measurement of time throughout the day (from beginning to end of service) for the 16 line by capturing the data recorded by the CAD/AVL whenever a bus encounters a time point. Parameters used by other agencies have a broad range and use selected time points vs Metro using all time points.

**CALCULATION** – Difference between scheduled time and actual time arriving at a time point based on 2 min early and 7 min late parameters.



 High Average – 75%

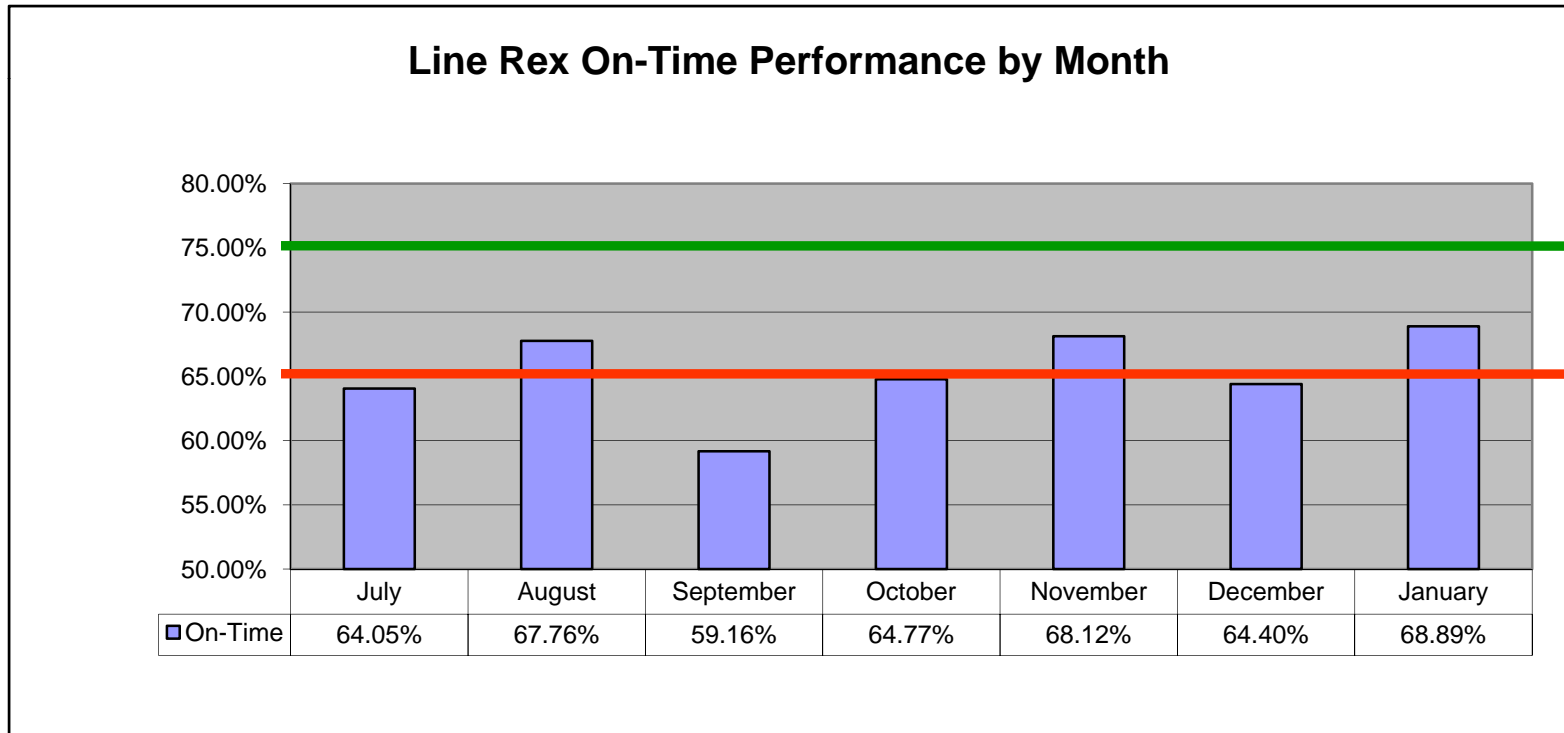
 Low Average – 65%



# Bus On-Time Performance

**DEFINITION** – Measurement of time throughout the day (from beginning to end of service) for the Rex line by capturing the data recorded by the CAD/AVL whenever a bus encounters a time point. Parameters used by other agencies have a broad range and use selected time points vs WMATA using all time points.

**CALCULATION** – Difference between scheduled time and actual time arriving at a time point based on 2 min early and 7 min late parameters.



— High Average – 75%

— Low Average – 65%