Washington Metropolitan Area Transit Authority

Board Action/Information Summary

◉ Action ○ Information	MEAD Number: 201924	Resolution: ○ Yes ◉ No

TITLE:

Efficiency Testing: Rail & Bus

PRESENTATION SUMMARY:

The Department of Safety & Environmental Management (SAFE) will discuss the types of efficiency testing used for MetroRail and MetroBus.

PURPOSE:

To provide a review of efficiency testing types and measures for both MetroBus and MetroRail.

DESCRIPTION:

The purpose of efficiency testing is to verify that operational staff, specific to Rail and Bus operations, are in compliance with rules and Standard Operating Procedures (SOPs). It also ensures that employees are proficient in job performance, and emphasizes rules designed to prevent accidents. Finally, it allows the organization to evaluate the results of the testing and take appropriate corrective actions.

Key Highlights:

• Efficiency testing is performed for Rail Operators, Rail Operations Control Center (ROCC) staff and Bus Operators.

• Results are aggregated and the organization makes adjustments based on the results.

Background and History:

Efficiency testing is one manner that WMATA uses to monitor rules compliance. Several methods of testing include field observations, operator inspection sheets, and recertification. Once completed, the testing results are tracked and mitigation strategies are installed to improve employee performance and safety.

Discussion:

The purpose of efficiency testing to verify that operational staff, specific to Rail and Bus operations, are in compliance with rules and SOPs. It also ensures that employees are proficient in job performance and it emphasizes rules designed to prevent accidents. Finally, it allows the organization to evaluate the results of the testing and take appropriate corrective actions.

WMATA has several rule sources that are used to measure efficiency. They include SOPs, the MetroRail Safety Rules and Procedures Handbook (MSRPH), Notices to Operators (NTOs), Employee Rulebooks, and Administrative Policies. All of these standards are reviewed on a regular basis and adjusted when necessary.

There are several different rail-related field observations that are used. Platform observations are conducted by managers to evaluate rail operators servicing stations during revenue service. Adherence to red signal and zero speed commands are also monitored to test the operators' response to receiving the signals. Yard operations specific to applying the train's hand brake is also conducted. This reduces the potential for unintentional train movement. Roadway worker protections and speed restrictions are also observed to ensure the safety of personnel conducting wayside maintenance and inspection activities during revenue service. Finally, train speed is monitored via Light Detection and Ranging (LIDAR) and train Vehicle Monitoring System (VMS) downloads. Rail operators have annual safety training and are recertified bi-annually; as are rail station managers.

Rail Operations Control Center (ROCC) management also observes its controllers. Anytime there is a shift change, a railroad status briefing is conducted, a personnel check (i.e., CMNT and RTRA personnel stationed at strategic locations) is reviewed, and documentation and worksheets are reviewed for completeness. ROCC radio communication is also monitored to ensure the proper protocol is followed. Incident management responses are reviewed to ensure station announcements are made, and that the proper personnel are dispatched based on the incident type. Finally, power removal is reviewed to ensure that the exact limits of power removal is communicated and confirmed, and that the correct breakers are removed and closed upon the completion of work. ROCC controllers are recertified on an annual basis and also participate in a three day roadway ride along program.

For MetroBus operators, bus stop servicing is monitored by supervisors to ensure accurate bus curbing to avoid rear end collisions and provide optimal conditions for customer boarding. Pre-trip inspections are also monitored to confirm that the bus is in proper working order prior to being dispatched. Ride checks are conducted to ensure that the bus is being operated in a safe manner and that the electronic device policy is being followed. Finally, bus shield use is monitored to improve bus operator safety. Compliance testing is performed on bus operators. Observation spot checks and field audits of the pre-trip inspections and vehicle operations are conducted as well. MetroBus operators are also recertified every three years.

Results from efficiency testing can lead to the revision or creation of policies and procedures. Permanent orders are also used to dictate new operational process changes. Training improvements also occur, in the form of new training, revised curriculum, and refining the recertification processes. There are also individual actions that take place if the results of the efficiency testing are poor. These actions may include additional training or discipline.

Finally, tracking the efficiency testing results are part of the "Stat" meetings that both MetroRail and MetroBus have on a monthly basis. These Stat meetings review all data associated with the performance of the given mode, and improvement methods are discussed in an open forum. Efficiency testing is also tracked as a Federal Transit Administration (FTA) corrective action.

FUNDING IMPACT:

No additional budget required.	
Project Manager:	Patrick Lavin
Project Department/Office:	SAFE

TIMELINE:

Previous Actions	• N/A
Anticipated actions after presentation	• Continue to monitor operator efficiency.

RECOMMENDATION:

To inform the Board's Safety Committee on the efforts made in monitoring operator efficiency, therefore improving safety.

This page intentionally left blank.

Efficiency Testing: Rail & Bus

Safety Committee
October 26, 2017

Purpose of Efficiency Testing

- Conduct operational tests and inspections periodically to verify compliance with rules, standard operating procedures
- Ensure employees proficient in job performance
- Emphasize rules designed to prevent accidents or incidents
- Evaluate results and take corrective actions

Operational Rules and Procedures

- Standard Operating Procedures (SOPs)
- Metrorail Safety Rules and Procedures Handbook (MSRPH)
- Notices to Operators (NTOs)
- Employee Rulebook
- Administrative Policies

Priority Observations for Compliance Rail – Field

Platform Observation

- While servicing stations in revenue service
- On mainline

Red Signal / Zero Speed Command

- Encountering red signal aspect or zero speed commands
- On mainline

Train Storage / Handbrake

- When storing Class I vehicles
- In yards and in tail tracks

Roadway Worker Protection / Speed Restriction

- When encountering roadway workers, stationary work sites and work gangs
- On mainline

Train Speed

- When operating Class I vehicle during revenue service
- In approach to and/or through work areas

Priority Observations for Compliance Rail – Control Center

Shift Relief 1 / Accepting Control

- Ensures full briefing on status of the railroad is received
- Rail/CMNT Support Personnel location and all other tracking documentation

Shift Relief 2 / Relinquishing Control

- Provides thorough briefing on status of the railroad
- Ensures that all worksheets are completed, legible, and accurate

Radio Communication

- Uses appropriate radio protocol and etiquette
- Ensures ROCC messages are repeated and understood

Incident Management

- Immediate announcement regarding incident and location.
- Dispatches supervisors, CMNT, TSSM/ERT and ATC etc., in a timely manner (3 min).

Removal and Restoration of Power

- Verifies the exact limits prior to removal or restoration of third rail power
- Verifies breakers with console partner before restoring power

Priority Observations for Compliance – Bus

Proper Servicing of Bus Stop

- Accurate curbing of bus to avoid rear end collisions
- Customer boarding

Pre Trip Inspection

- Safety defects (e.g., fluid leaks, steering, horn & lights, safety equipment like stop lights, wipers and seat belts, brakes, tires, wheels/lugs, fire extinguisher, door interlocks)
- Other areas (e.g., wheelchair lifts, transmission, engine idle, suspension, body, video surveillance)

Safe Vehicle Operation

- Speeding
- Red light violations
- Reckless driving (swerving, hard braking, following distance)
- Seat belt use

Electronic Device Policy Adherence

- When and how devices are used – on board, in emergencies, at terminals
- Zero tolerance for unauthorized use

Bus Shield Use

- Safety Shields are considered Personal Protective Equipment and as such their use is mandatory
- In revenue service all sections of shield must be closed for operator safety and to meet Americans with Disabilities Act requirements

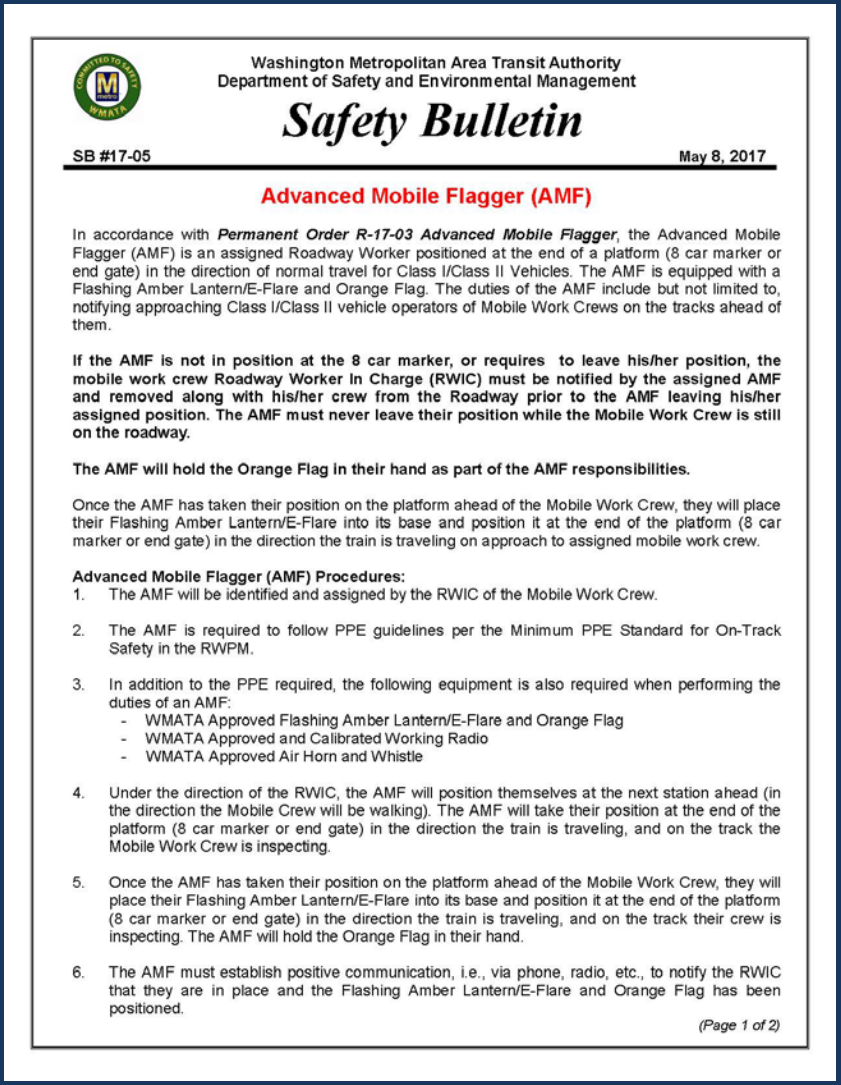
Evaluate Results, Corrective Actions

Organizational

- Revise or create policies, procedures
- Permanent orders
- Training improvements
  - New training
  - Retraining
  - Define recertification processes

Individual

- Discipline
- Training



Washington Metropolitan Area Transit Authority
Department of Safety and Environmental Management

Safety Bulletin

SB #17-05 May 8, 2017

Advanced Mobile Flagger (AMF)

In accordance with ***Permanent Order R-17-03 Advanced Mobile Flagger***, the Advanced Mobile Flagger (AMF) is an assigned Roadway Worker positioned at the end of a platform (8 car marker or end gate) in the direction of normal travel for Class I/Class II Vehicles. The AMF is equipped with a Flashing Amber Lantern/E-Flare and Orange Flag. The duties of the AMF include but not limited to, notifying approaching Class I/Class II vehicle operators of Mobile Work Crews on the tracks ahead of them.

If the AMF is not in position at the 8 car marker, or requires to leave his/her position, the mobile work crew Roadway Worker In Charge (RWIC) must be notified by the assigned AMF and removed along with his/her crew from the Roadway prior to the AMF leaving his/her assigned position. The AMF must never leave their position while the Mobile Work Crew is still on the roadway.

The AMF will hold the Orange Flag in their hand as part of the AMF responsibilities.

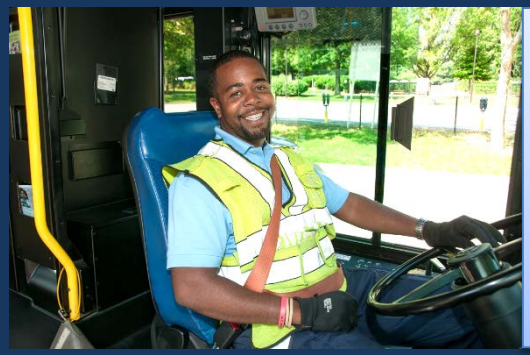
Once the AMF has taken their position on the platform ahead of the Mobile Work Crew, they will place their Flashing Amber Lantern/E-Flare into its base and position it at the end of the platform (8 car marker or end gate) in the direction the train is traveling on approach to assigned mobile work crew.

Advanced Mobile Flagger (AMF) Procedures:

1. The AMF will be identified and assigned by the RWIC of the Mobile Work Crew.
2. The AMF is required to follow PPE guidelines per the Minimum PPE Standard for On-Track Safety in the RWPM.
3. In addition to the PPE required, the following equipment is also required when performing the duties of an AMF:
   - WMATA Approved Flashing Amber Lantern/E-Flare and Orange Flag
   - WMATA Approved and Calibrated Working Radio
   - WMATA Approved Air Horn and Whistle
4. Under the direction of the RWIC, the AMF will position themselves at the next station ahead (in the direction the Mobile Crew will be walking). The AMF will take their position at the end of the platform (8 car marker or end gate) in the direction the train is traveling, and on the track the Mobile Work Crew is inspecting.
5. Once the AMF has taken their position on the platform ahead of the Mobile Work Crew, they will place their Flashing Amber Lantern/E-Flare into its base and position it at the end of the platform (8 car marker or end gate) in the direction the train is traveling, and on the track their crew is inspecting. The AMF will hold the Orange Flag in their hand.
6. The AMF must establish positive communication, i.e., via phone, radio, etc., to notify the RWIC that they are in place and the Flashing Amber Lantern/E-Flare and Orange Flag has been positioned.

(Page 1 of 2)

Compliance Testing



- Spot checks of bus operator pre-trip inspections
- Bus ride-alongs by field supervisors (seatbelts, speed limit, and shields)
- Bus DriveCam and closed-circuit camera reviews
- 3-year bus operator recertification training

- Spot checks of rail operator pre-trip inspections
- Annual safety training for rail operators
- Bi-annual rail operator recertification training
- Bi-annual station manager recertification training with annual CPR certification

- Spot checks/audits of controller (RWP, communication and incident)
- Annual RWP training and certification
- 3-day Roadway Ride Along program
- Annual controller recertification training

Tracking Results

- Management tracks efficiency testing results in monthly “Stat Meetings”
- Efficiency testing tracked as a Federal Transit Administration corrective action