

Washington Metropolitan Area Transit Authority

## Board Action/Information Summary

☐ Action ☒ Information

MEAD Number:  
201748

Resolution:  
☐ Yes ☒ No

### TITLE:

Update on FTA and NTSB Safety Activities

### PRESENTATION SUMMARY:

The Department of Safety & Environmental Management (SAFE) brief the Board on corrective actions plans (CAPs), FWSO actions and National Transportation Safety Board (NTSB) Accident Investigation relative to the L'Enfant Smoke and Arcing Incident of January 2015.

### PURPOSE:

The briefing on FTA's FWSO actions and NTSB Accident Investigation provides an update to the Safety Committee on ongoing work activities and deliverables between the FWSO and WMATA as well as the activities/schedule of the NTSB as it relates to the L'Enfant Plaza Smoke and Arcing Incident of January 2015. Further, the public report provides transparency to our stakeholders, employees and public in the Washington metropolitan area community.

### DESCRIPTION:

WMATA continues to work collaboratively with all external agencies in an effort to strengthen the safety of the system for its employees and public.

#### Key Highlights:

- Over 445 action items (out of 732) have been submitted as progress continues on schedule towards closing open and approved corrective action plans, from the FTA Safety Management Inspection.
- 8 CAPs have been officially closed reducing the total number of open CAPs to 214, as reported in monthly CAP report.
- WMATA submitted its plan to address the FWSO three-part "safety inspection blitz" in addition to ongoing field inspections, triennial audits.
- NTSB held its public Board meeting and approved the L'Enfant Smoke and Arcing Incident report with 43 findings and 31 recommendations being adopted; 24 new recommendations to WMATA.

#### Background and History:

Following the January 2015 smoke and arcing incident, the NTSB launched an investigation, and the Federal Transit Administration initiated a Safety Management Inspection. Both led to recommendations and required follow up actions by WMATA.

As part of the NTSB investigation, a formal and public NTSB Investigative Hearing was held in June 2015. After completion of the hearing, WMATA was afforded an opportunity to review factual reports for technical accuracy.

In March, the FTA conducted a Safety Management Inspection which resulted in an issuance of Safety Directive 15-1 (June 2015) identifying 54 safety findings and 91 required actions to improve safety. The SMI evaluated operations and maintenance of both bus and rail, safety management capabilities and organizational structure, adopting an all-encompassing, safety management system (SMS) approach. WMATA systematically worked to develop corrective action plans (CAPs) for all actions and in September 2015 received FTA's approval of the CAPs as "open and acceptable". WMATA is working to close each of the CAPs and submits weekly deliverables to the FTA towards completion of the CAPs.

On October 9, 2015 FTA (specifically the FTA WMATA Safety Oversight or FWSO) assumed direct oversight of WMATA, exercising its new authority to do so, as established by the Moving Ahead for Progress in the 21st Century Act (MAP-21) in 2012. The same act (and subsequent rulemakings) also codifies a Safety Management System (SMS) framework for safety oversight of all public transit properties, to be managed by each transit property's State Safety Oversight Agency. FWSO and WMATA are collaborating and continue to transition from Tri-State Oversight Committee to FTA oversight. As part of this transition, FWSO has reconciled/consolidated (under Safety Directive 16-2) all open items from the previous oversight, TOC, into 4 categories and 153 CAPs (of which 22 merged with one of the existing 91 FTA SMI CAPs). All CAPs (from FTA SMI or TOC) have been consolidated and provided in a monthly report to the management and the Board of Directors.

Additionally, WMATA's Investigative Report of the August 6, 2015 Metrorail derailment (non-passenger) between Federal Triangle and Smithsonian stations was submitted on October 14, 2015 for review and approval before public release. On February 16, 2016, the FWSO submitted a request for additional information to be included in the draft accident report. This request was completed and submitted back to the FWSO within the 30 days requirement.

As part of the FTA FWSO oversight role, routine field inspections and triennial audits are occurring as well as a safety blitz focused on three areas; track integrity, yard vehicle securement and red signal violations. The first of these, track integrity has been completed and awaiting the FTA FWSO's official report. The Authority has received and responded on April 28, 2016 to a formal letter outlining Fire/Life safety issues identified during that track integrity inspection.

In regards to the January 2015, L'Enfant Plaza smoke and arcing incident, the NTSB has conducted its public Board meeting on May 3, 2016 and approved its official accident report. The report contains 43 findings and 31 total recommendations; 24 to the Authority and the remainder to external agencies. The NTSB stated the probable cause for Metro's fatal January 12, 2015 L'Enfant Plaza smoke incident was "a prolonged short circuit that consumed power system components" resulting from the transit agency's "ineffective inspection and maintenance practices". Those ineffective practices persisted as a result of the failure of senior Metro management to "proactively assess and mitigate foreseeable risk". Contributing to the incident were inadequate

safety oversight by the Tri-State Oversight Committee and the Federal Transit Administration. The Authority is reviewing and developing a coordinated corrective action plan to address each of the recommendations.

### **Discussion:**

WMATA continues to welcome oversight in an effort to assist in identifying issues as part of the infrastructure rehabilitation and enhancement to safety for our employees and public. Currently eight CAPs out of the 222 total have been closed by FWSO. Of the current NTSB recommendations there are eight (four from the original 29 and four early recommendations from the L'Enfant incident) remaining to be closed combined with 24 new recommendations for a total of 32 NTSB recommendations.

On April 4, 2016, the FTA FWSO began a track integrity safety blitz on the Metrorail system comprised of a diverse team of experts from the Federal Railroad Administration (FRA) to FWSO staff to consultants. Over 60 miles of track was inspected included 27 areas where the Authority had recently performed detailed inspection and repairs. Although the Authority is still awaiting FWSO official report, corrective actions have already begun on identified fire/life safety issues. Additionally, in our briefings and communication from FTA FWSO has noted that on the whole "FWSO's teams found the WMATA's track conditions generally conform to WMATA's track safety standards..." and "FWSO found that WMATA was taking responsible steps to strengthen its [traction power maintenance] program...". The FWSO is continuing with the safety blitz relative to yard vehicle securement and red signal violations.

### **FUNDING IMPACT:**

Define current or potential funding impact, including source of reimbursable funds.	
Project Manager:	Patrick Lavin, CSO
Project Department/Office:	SAFE Necessary funding is within approved annual budget.

### **TIMELINE:**

<b>Previous Actions</b>	<ul style="list-style-type: none"> <li>• Previous briefing February 25, 2016</li> </ul>
<b>Anticipated actions after presentation</b>	<ul style="list-style-type: none"> <li>• Continue to fully implement all NTSB and FTA CAPs</li> <li>• Continue to strengthen safety culture</li> </ul>

### **RECOMMENDATION:**

To inform the Board's Safety Committee of the status of safety actions relative to FTA FWSO and the NTSB.

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# Washington Metropolitan Area Transit Authority

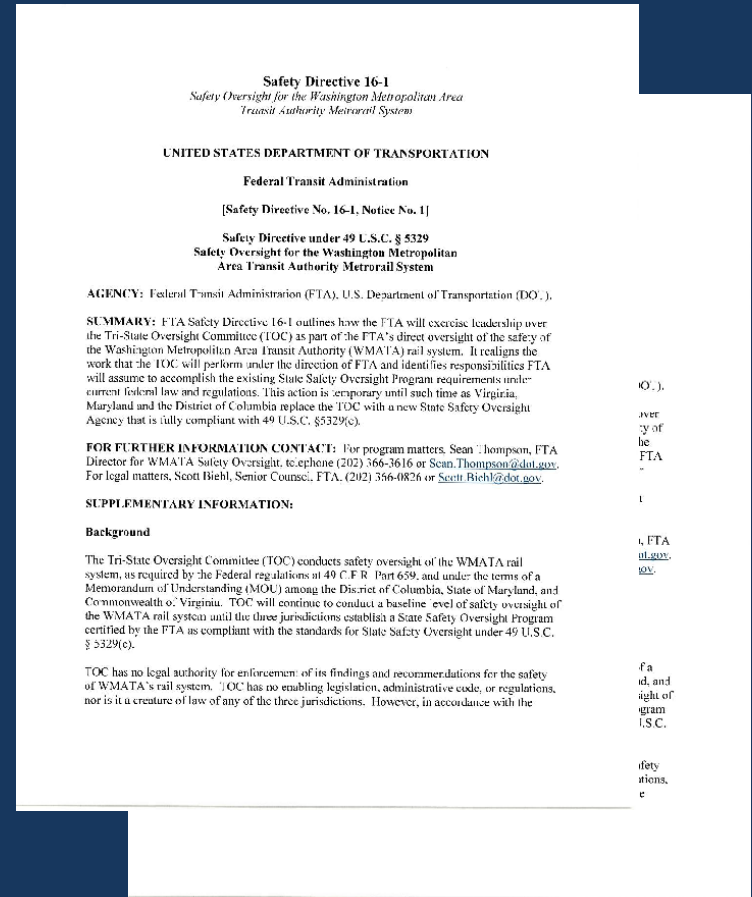
## Update on FTA & NTSB Actions

Safety Committee  
May 12, 2016



# FTA WMATA Safety Oversight (FWSO)

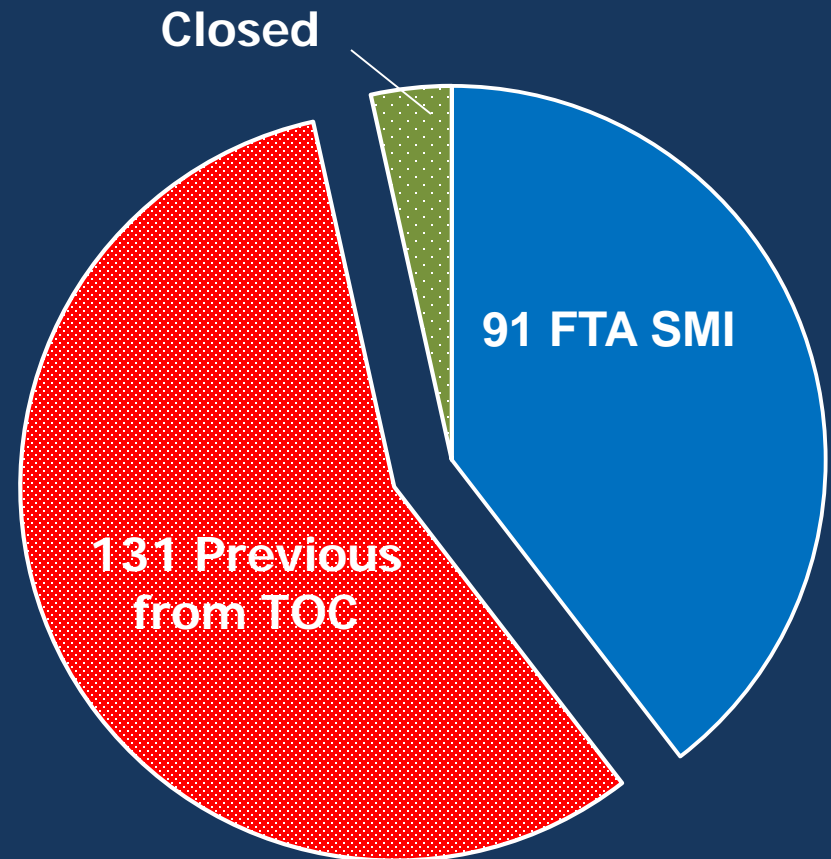
- Continue to work collaboratively
- Open access and transparency
- Monthly Management Meetings





# FTA WMATA Safety Oversight (FWSO)

- 91 CAPs equal 732 individual actions
- Re-examined and merged TOC CAPs
- 445 actions submitted, 8 CAPs closed
- All will be addressed



Approved Corrective Action Plans



# FTA WMATA Safety Oversight (FWSO)

- Received the FTA FWSO Program Standards and Procedures
- Submitted System Safety Program Plan (SSPP) for approval
- Submitting/finalizing accident and incident reports





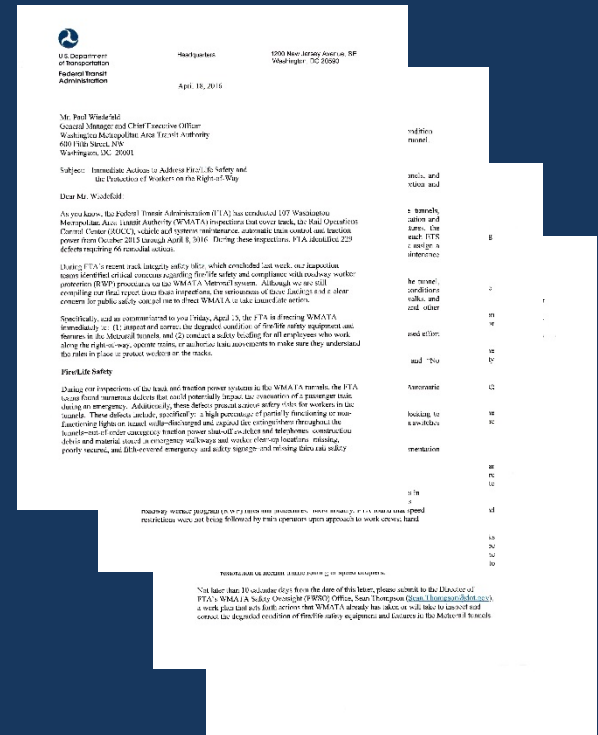
# FTA WMATA Safety Oversight (FWSO)

- FWSO performed over 109 field inspections
- FWSO performing three-part “safety inspection blitz”
  - Track integrity
  - Red signal overruns
  - Rail vehicle securement
- FWSO Safety and Security Triennial Audits performed by TOC personnel; five in 2016



# FTA WMATA Safety Oversight (FWSO)

- Track integrity, one of three-part “safety inspection blitz”
  - Over 20 FWSO staff
  - Inspected 60 miles over six days
  - Awaiting official report
    - Fire/Life safety
    - Infrastructure
    - Compliance
  - FWSO recognized improvements



# NTSB Recommendations and Reports

- NTSB Recommendations
  - 24 of 29 original closed
  - Four immediate, additional from L'Enfant incident
- NTSB Report on L'Enfant Smoke and Arcing Incident
  - NTSB Board meeting held May 3, 2016

National Transportation Safety Board (NTSB)  
Recommendations Progress Tracker  
As of April 05, 2015

WMATA Hazard Risk Category	Description	UAP No.
I	Unacceptable: The hazard must be mitigated in the most expeditious manner possible.	6
II	Unacceptable w/ Executive Safety Committee (ESC) action required: The hazard must be mitigated. If necessary, the Chief Safety Officer may develop interim mitigations in coordination with the ESC, subject to FTA approval.	10
III	Acceptable w/ review: The Chief Safety Officer must determine if the hazard is adequately controlled or mitigated as is.	7
IV	Acceptable w/ review: The hazard does not need immediate mitigation, but corrective actions are encouraged.	2

Legend: Closed (blue circle), Open-Acceptable Response (orange circle), Submitted (green circle), In-Progress (yellow circle), Not Started (grey circle)

To accordance with FTA requirements, WMATA's hazard risk categories are expressed in terms of severity and probability of occurrence. This is used as a safety management tool for mitigating hazards to the lowest practicable level.

NTSB #	NTSB Required Action(s)	WMATA Hazard Risk Category	Date Closed	Action Status	WMATA Comments
NTSB 9-06-001	Equip all existing and future train equipment with full back protection. <i>Issue Date: April 2008</i>	II	May 2013	Closed	Closed
NTSB 9-07-024	Implement QA Procedures to ensure accurate Wheel Truing. <i>Issue Date: December 2007</i>	III	June 2013	Closed	Closed
NTSB 9-07-025	Ensure appropriate coordination between all departments responsible for maintenance and design to resolve issues before new equipment is purchased. <i>Issue Date: December 2007</i>	III	October 2013	Closed	Closed
NTSB 9-07-026	Establish a single point of responsibility within CHMT to quickly evaluate and incorporate actions identified through accident investigations or related research. <i>Issue Date: December 2007</i>	II	October 2013	Closed	Closed
NTSB 9-07-027	Establish written procedure regarding oil lubrication for single track operations over switch, turnouts, Lubrication of Switch Face - LSWC. <i>Issue Date: December 2007</i>	III	October 2013	Closed	Closed
NTSB 9-07-028	Expedite and completed by 2008, the replacement of all No. 8 turnouts to guarded turnouts. <i>Issue Date: December 2007</i>	I	June 2013	Closed	Closed
NTSB 9-08-001	Review and update MGRPH to provide for layers of protection for Roadway Worker - adding requirements for Briefings, Scope & Duties, acknowledgment from trains - etc. (SP)EH. <i>Issue Date: January 2008</i>	III	October 2013	Closed	Closed
NTSB 9-08-002	Establish a systematic approach to frequent unexpected checks of employee compliance with Metrolink operating and safety rules and procedures. <i>Issue Date: January 2008</i>	III	November 2012	Closed	Closed
NTSB 9-08-003	Perform periodic hazard analyses on the deficiencies identified through the Compliance and Operating Rule check trend data base. <i>Issue Date: January 2008</i>	II	November 2012	Closed	Closed
NTSB 9-08-004	Promptly implement appropriate technology that will automatically alert nearby workers of approaching trains and will automatically alert train operators when approaching areas with workers on or near the tracks. <i>Issue Date: January 2008</i>	I		In-Progress	WMATA is addressing NTSB's comments received on March 15, 2016.
NTSB 9-09-006	Safety redundancy of the train control system; evaluate track occupancy data via a real time feed to detect loss of shunt and automatically generating alerts. <i>Issue Date: July 2009</i>	I	July 2012	Closed	Closed



# NTSB Recommendations and Reports

- NTSB Report on L'Enfant Smoke and Arcing Incident Public Board Meeting
  - Accident report to NTSB Board accepted
  - 43 findings identified
  - 31 total recommendations; 24 new to Metro
  - Recommendations range from new/revised policies and procedures to training to infrastructure improvements and drills/testing
  - FTA/FRA comparison within appendix
- Corrective action plans will be developed
- Staff will return with additional details