

Washington Metropolitan Area Transit Authority
Board Action/Information Summary

Action Information

MEAD Number:
201734

Resolution:
 Yes No

TITLE:

Briefing on Jumper Cable Inspection and Repair

PRESENTATION SUMMARY:

Present to the Board's Safety Committee a briefing on the Metrorail jumper cable inspection and repair.

PURPOSE:

To inform the Board's Safety Committee of the traction power cable (jumper cable) inspection and repair as well as the planned next steps.

DESCRIPTION:

On Wednesday, March 16, 2016, the Metrorail system was shutdown for a documented inspection of the third rail power jumper cables throughout the underground sections of the system. The decision was made by the General Manager and supported by the Board of Directors after the Monday, March 14, 2016 incident near McPherson Square Station which presented similarities to the L'Enfant Plaza smoke and arcing incident of January 2015. Beginning at midnight Wednesday through opening on Thursday morning, March 17th, WMATA and contractor personnel inspected, documented and reviewed all underground jumper cables; repairing 27 defects and documenting other non-emergency repairs required.

Key Highlights:

- Underground sections divided into 22 inspection zones
- All zones inspected, documented and reviewed
- A total of 1,928 cables were inspected, which includes jumper cables, track feeder cables, transition and expansion cables.
- 27 defects, including three of high priority, were corrected
- Work is underway on 338 other locations requiring non-emergency repair
- Inspection of above ground jumper cables is underway
- Improved cable inspection program being developed

Background and History:

The decision to shutdown the Metrorail system to document and inspect all underground cables was based on ensuring the safety of our customers and employees. The January 12, 2015 and March 14, 2016 incidents as a backdrop led to an immediate need to perform a comprehensive inspection of 1,928 underground

traction power cables, which included jumper cables. The defects found were broadly broken down into four major categories: emergency repair, non-emergency repair, cable on ground requiring engineering assessment, cable in metal conduit requiring engineering assessment. All 27 emergency repair defects were repaired prior to system opening for Thursday's service. Work on the 338 locations requiring non-emergency repair has begun the week of March 21, 2016. The conditions of the 338 locations range from cable on the ground, debris near/around cables to cables not meeting engineering specifications or minor damage. After the January 2015 L'Enfant smoke and arcing incident, Metro performed a documented inspection of the cables and provided that information to the NTSB.

Discussion:

Staff has begun repair and remediation of the 338 locations requiring non-emergency repair that were identified during the March 16th safety shut-down.

In addition, beginning this week, the expert team (comprised of outside experts and Metro personnel) will provide specialized training to 12 inspectors (six crews), including classroom and wayside instruction, to perform more comprehensive track and power inspections. This will include new, more detailed, inspection form to improve defect identification and reporting. The specialized crew will begin April 1, 2016.

A contract has been awarded to a consulting firm with railroad electrical engineer specialists to assist Metro in developing a new traction power organization and program. By the second week in April, the contractor will provide recommendations for a new preventive maintenance and inspection schedule and procedure.

FUNDING IMPACT:

Define current or potential funding impact, including source of reimbursable funds.	
Project Manager:	Lou Brown
Project Department/Office:	SAFE This is an information item; no additional funding is requested at this time.

TIMELINE:

Previous Actions	None
Anticipated actions after presentation	<ul style="list-style-type: none"> • Inspect all above ground jumper cables • Complete the repair of the non-emergency items identified • Develop and implement a sustainable traction power cable inspection program

RECOMMENDATION:

To inform the Board's Safety Committee of the traction power cable inspection, findings and next steps.



Washington Metropolitan Area Transit Authority

Briefing on Jumper Cable Inspection & Repair

Safety Committee
March 24, 2016

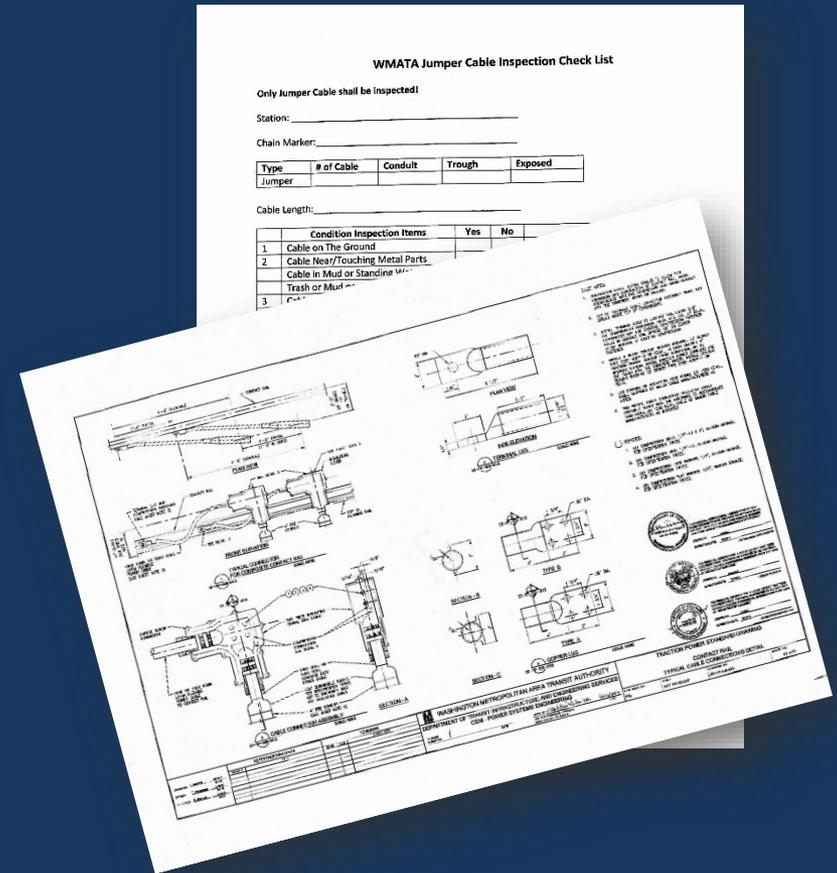
Background

- Recent incident at McPherson Square presented similarities to L'Enfant Plaza incident of January 2015
- System was shut down to allow for immediate inspection, and if needed, repairs
- NTSB, FTA, customer and stakeholder notifications made through all communication channels
- System shutdown midnight Tuesday until Thursday 5AM
- Enhanced Metrobus service provided



Inspection & Repair

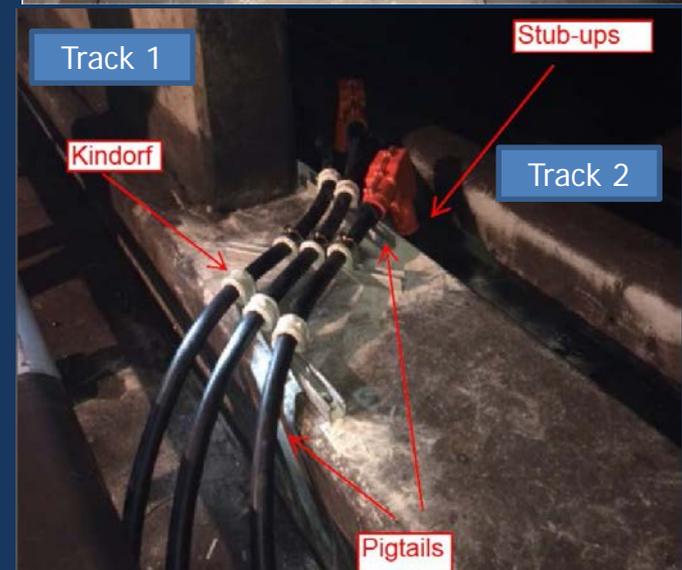
- Detailed plan for inspection and repair implemented
- System divided into 22 inspection zones
- All zones inspected, documented and reviewed
- Inspection revealed 27 defects, three of which were considered highest priority



Inspection & Repair

- Three of the 27 considered “highest priority”
 - McPherson Square (Recent Incident)
 - Potomac Avenue
 - Foggy Bottom
- All 27 defects have been corrected
- Inspection revealed 338 locations requiring non-emergency repair
- Inspection and repair process communicated to NTSB and FTA WMATA Safety Oversight

McPherson Sq (Before and After)



Next Steps

- Remedy of the non-emergency items identified at 338 locations is underway
- Established an interim team of employees and consultants to develop a new maintenance group to focus on power assets and create a sustainable inspection program
- On April 1st start a monthly inspection program until the new inspection program is defined

