



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170705-WMATA-WP-1		
	2017	07	05				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RTRA	Sub-Department	ROCC
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Rail Operations Control Center (ROCC) 3500 Pennsy Drive Landover, MD 20785						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	ROCC-RC-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

### Activity Summaries

Inspection Activity #	1	Inspection Subject	ROCC Rules Compliance Observation				Activity Code		ROCC	RC	OBS
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	N/A	Out Brief Conducted	Yes	Time	1000-1530	Outside Shift	No	
Related Reports	Safety Management Inspection (SMI), Final Report, June 17, 2015		Related CAPS / Findings		Required Actions: R-1-6-a, R-1-6-b; R-1-9-a						
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	MSRPH	Section 1 – General Rules (Radio Usage and Operation): Rules 1.69 – 1.88									
	RWPM	Permanent Orders: No. T-16-10, No. R-17-03, & No. R-17-02									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
				X							
Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)		From		To			
						N/A		n/a			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		WINSLOW L. POWELL		Date	
Inspector in Charge - Name Winslow Powell		Inspection Team Tamara Powell			

Digitally signed by WINSLOW L. POWELL  
DN: c=US, o=U.S. Government, ou=FTAHQ, postalCode=20591, email=Winslow.L.Powell@dot.gov, cn=WINSLOW L. POWELL  
Date: 2017.07.07 06:49:07 -0400



Vehicles	Head Car Number	Number of Cars	Equipment	N/A	
	N/A	N/A			
<b>Description</b>	<p>An FWSO Inspector conducted a Rules Compliance observation at the Rail Operations Control Center (ROCC). The inspector observed radio activities on Operations (Ops) 1 Console for compliance with the Metrorail Safety Rules and Procedures Handbook (MSRPH), as well as permanent orders that govern roadway access activities and radio procedures. The inspector also observed other ROCC procedures and noted RTC's overall performance and response to incidents that took place during the shift.</p> <p><b>Radio Procedures and Protocols:</b></p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector observed the rail traffic controllers (RTC) during each radio broadcast. The RTC acknowledged all radio requests and ended each transmission with "over" and used "out" when the communication loop concluded.</li> <li>○ The RTCs coordinated between the field portable track units, train operators, station managers, and each other to monitor revenue service. They ensured that maintenance personnel were aware of anomalies and operating conditions that may potentially impact their roadway access requests and inspections.</li> <li>○ The RTCs employed International Civil Aviation Organization (ICAO) standards for transmissions involving power requests and alphanumeric station identification.</li> <li>○ The RTCs ensured each unit or operator acknowledged each operating instruction, clearance, and transmission with 100 percent word-for-word read back.</li> <li>○ The RTCs made clear and appropriate radio broadcasts that informed personnel of all operational anomalies and established roadway access protection in place (e.g., foul time).</li> </ul> <p><b>Documentation and Checklists:</b></p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector reviewed all required documentation checklists regarding roadway access and foul time, noting that the RTC maintained a written log of all personnel on the roadway with recorded all call-on/call-off times, level of protection, and other required information to manage and monitor access and coordination.</li> <li>○ The foul time checklists were properly filled out in accordance with Metro rules and permanent orders; including time and location of access, the establishment of red signal and prohibit exits, human form and blocked track, and trains restricted and/or affected by each request.</li> <li>○ The FWSO Inspector observed two relieving RTCs at the Ops 1 Console each electronically sign onto Advanced Information Management (AIM) System screen at the beginning of their shift, as well as initial the logbook (paper records) acknowledging defects and anomalies on the line. The RTCs also verbally exchanged operating conditions and anomalies upon each transfer of duties.</li> </ul> <p><b>Roadway Access:</b></p> <p>The FWSO Inspector observed the RTC radio performance and other required duties associated with RWP access requests for five work crews on the Ops 1 Console, commencing at 1000 hours. There were seven foul time (FT) requests made for the crew's level of protection during the observation period. The RTC was compliant with Permanent Order No. R-17-02 (Granting Foul Time) and Permanent Order No. R-17-03 (Advanced Mobile Flagger [AMF]).</p> <ul style="list-style-type: none"> <li>○ The personnel followed proper radio protocol when they called on/off over the radio. This included identification of self and work crew, the location of foul time request (station or chain marker), and the reason for the request.</li> <li>○ Personnel acknowledged location and presence of AMFs required for each access request.</li> <li>○ The RTCs established and broadcasted all red signals and "prohibit exits," as well as human form and blue block track, via the AIM system as required by each level of protection.</li> </ul>			<b>Number of Defects</b>	0
				<b>Recommended Finding?</b>	No
				<b>Remedial Action Required?</b>	No
				<b>Recommended Reinspection?</b>	No



	<ul style="list-style-type: none"> <li>○ The RTC required 100 percent and word-for-word repeat backs for all requests, ensuring the track units were in receipt of and repeated back full instructions and clearance. The RTC Inspector observed one communication loop where the controller requested a repeat back from the unit three times until the unit could repeat his FT instructions back to the RTC verbatim.</li> <li>○ The RTC contacted the train in the vicinity regarding all FT requests, making general announcements for all other access clearances and locations.</li> <li>○ The RTC properly broadcast all on/off times for general and foul time requests.</li> </ul> <p><b>The FWSO Inspector did not note any ROCC rules compliance defects.</b></p> <p><b>Other Notable Observations:</b></p> <ol style="list-style-type: none"> <li>1) There was a radio communication problem encountered with a power crew. The crew was under a FT request in the vicinity of Forest Glen and were asked to clear to a place of safety to allow revenue service to pass. When the train traffic cleared up, the RTCs could no longer communicate with personnel via radio. The power unit was finally reached via a service train. The power crew personnel called the RTC via a landline phone and was picked up by a revenue train to clear the area. The RTC called in area chain markers to Communications.</li> <li>2) At 1123 hours, a slow speed restriction was imposed at Silver Spring on track #1 due to a broken joint bar. An emergency response crew responded and made emergency repairs under FT from 1237 to 1249 hours. Trains were single-tracked on (or via) track 2 from Silver Spring to Takoma for the duration of the repairs. Restriction subsequently was lifted after the repairs were made.</li> <li>3) An FWSO Inspector observed that on-duty assistant superintendents were vigilant; consistently monitoring and visiting each console, and were communicating instruction and operations conditions to the RTCs.</li> </ol>		
<b>Remedial Action</b>	N/A		



Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation
Federal Transit Administration

Agency/Department Information

Table with 4 main rows: Inspection Date (2017-07-06), Report Number (20170706-WMATA-AG-1), Rail Agency Name (Washington Metropolitan Area Transit Authority), Rail Agency Department (RTRA), Rail Agency Department Contact Information (redacted), and Inspection Location (Rail Operations Control Center (ROCC), 3500 Pennsy Drive, Landover, MD 20785).

Inspection Summary

Table with 7 columns (Inspection Activity #, 1-6) and 8 rows (Activity Code, Inspection Units, Inspection Subunits, Defects (Number), Recommended Finding, Remedial Action Required, Recommended Reinspection).

Activity Summaries

Table with 10 columns (Inspection Activity #, 1, Inspection Subject, ROCC Rules Compliance Observation, Activity Code, ROCC, RC, OBS) and 10 rows (Job Briefing Employee Name/Title, Related Reports, Related Rules, SOPs, Standards, or Other, Inspection Location, Line(s), etc.).

1 The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature: ADAM ANTHONY GIOVANDO. Digitally signed by ADAM ANTHONY GIOVANDO. Inspector in Charge - Name: Winslow Powell. Inspection Team: Tamara Powell.





Vehicles	Head Car Number	Number of Cars	Equipment	N/A	
	N/A	N/A			
<b>Description</b>	<p>An FWSO Inspector conducted a Rules Compliance observation at the Rail Operations Control Center (ROCC). The inspector observed radio activities on Operations (Ops) 3 Console, Green/Yellow and partial Blue Lines for compliance with the Metrorail Safety Rules and Procedures Handbook (MSRPH), as well as permanent orders that govern roadway access activities and radio procedures. The inspector also observed other ROCC procedures and noted rail traffic controllers (RTC)'s overall performance and response to incidents that took place during the shift.</p> <p><b>Radio Procedures and Protocols:</b></p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector observed the RTCs during each radio broadcast. The RTC acknowledged all radio requests and ended each transmission with "over" and "out" until the communication loop concluded.</li> <li>○ The RTCs coordinated between the field portable track units, train operators, station managers and each other, to monitor revenue service. They ensured that maintenance personnel were aware of anomalies and operating conditions that may potentially impact their roadway access requests and inspections.</li> <li>○ The RTCs employed International Civil Aviation Organization (ICAO) standards for radio transmissions and notification phone calls involving power requests and alphanumeric station identification.</li> <li>○ The RTCs ensured each unit or operator acknowledged each operating instruction, clearance, and transmission with 100 percent word-for-word read back.</li> <li>○ The RTCs made clear and appropriate radio broadcasts that informed personnel of all operational anomalies and established roadway access protection in place (e.g., foul time).</li> </ul> <p><b>Documentation and Checklists:</b></p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector reviewed all required checklists regarding roadway access and foul time.</li> <li>○ The RTCs maintained a written log of all personnel on the roadway ("<i>Maintenance Access Form</i>") with recorded all call-on/call-off times, the level of protection, and other required information to manage and monitor access and coordination.</li> <li>○ Foul time checklists were properly filled out in accordance with Metro rules and permanent orders. This included time and location of access, the establishment of red signal and prohibit exits, human form and blocked track, and trains restricted and/or affected by each request.</li> <li>○ The FWSO Inspector observed one transfer shift at the Ops 3 Console. This occurred relieving RTC electronically signed onto Advanced Information Management (AIM) System screen at the beginning of his shift and initialed the logbook ("<i>ROCC Daily Activity Log</i>") acknowledging defects and anomalies on the line.</li> <li>○ The RTCs also verbally exchanged operating conditions and anomalies upon each transfer of duties.</li> </ul> <p><b>Roadway Access:</b></p> <p>The FWSO Inspector observed the RTC's radio performance and other required duties associated with roadway worker protection (RWP) access requests for four work crews on the Ops 3 Console, commencing at 1900 hours. There were no foul time requests made for the crew's level of protection during the observation period. The RTC was compliant with Permanent Order No. R-17-02 (Granting Foul Time) and Permanent Order No. R-17-03 (Advanced Mobile Flagger [AMF]).</p> <ul style="list-style-type: none"> <li>○ The personnel followed proper radio protocol when they called on/off over the radio. This included identification of self and work crew, the location of foul time request (station or chain marker), and the reason for the request.</li> <li>○ Personnel acknowledged location and presence of AMFs required for each access request.</li> </ul>			<b>Number of Defects</b>	0
				<b>Recommended Finding?</b>	No
				<b>Remedial Action Required?</b>	No
				<b>Recommended Reinspection?</b>	No



	<ul style="list-style-type: none"> <li>○ The RTCs established and broadcasted all red signals and “prohibit exits,” as well as human form and blue block track via the AIM system, as required by each level of protection (e.g., train approach warning [TAW], foul time [FT], etc.).</li> <li>○ The RTC required 100 percent and word-for-word repeat backs for all requests, ensuring the track units were in receipt of and repeated back full instructions and clearance.</li> <li>○ The RTC properly broadcast all on/off times for all access requests.</li> </ul> <p><b>The FWSO Inspector did not note any ROCC rules compliance defects.</b></p> <p><b>Other Notable Observations:</b></p> <ul style="list-style-type: none"> <li>● Rail Operations supplemented the baseball game crowd with four gap trains.</li> <li>● Assistant Superintendents constantly monitored operations, instructing RTCs to be vigilant for possible water issues; giving overnight preference to drainage pumping station (DPS) personnel accessing pump rooms.</li> <li>● At approximately 2241 hours, train #307 reported a door problem at Fort Totten on track #2. The front deuce passenger doors closed uncommanded, and doors on the rear four cars would not close. The operator was finally able to overcome the door problem, but the brakes would not release. The RTC instructed the operator to attempt to operate the train from the opposite end (facing Greenbelt). This action prompted the brakes to release; thus, initiating a successful operation from the opposite end. The train proceeded adverse on track #2 and crossed to track #1 via the Fort Totten crossover, then proceeded light (i.e., with no passengers) to Greenbelt without further incident. With all appropriate personnel notified, the crew accommodated back to Alexandria Yard. All announcements were properly made and service headways were adjusted. <u>Incident Delay</u> = 20 minutes headway.</li> </ul>		
<b>Remedial Action</b>	N/A		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	201700706-WMATA-AG-2		
	2017	07	06				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	C- Line, tracks 1 and 2, Platform Inspection between Huntington (C15) and Arlington Cemetery (C06).						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-WI-PI					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	2					
Recommended Finding	Yes					
Remedial Action Required <sup>1</sup>	Yes					
Recommended Reinspection	Yes					

### Activity Summaries

Inspection Activity #	1	Inspection Subject					Platform Track Inspection			Activity Code		TRK	WI	PI
Job Briefing Employee Name/Title	N/A			Accompanied Inspector?	N/A	Out Brief Conducted	N/A	Time	1000-1400	Outside Shift	No			
Related Reports	N/A			Related CAPS / Findings			N/A							
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	MSRPH													
	TRST 1000													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
			X					X	X					
Line(s)	C-Line	Track Number	tracks 1 and 2	Chain Marker and/or Station(s)	From				To					
					Huntington (C15)				Arlington Cemetery (C06)					
Vehicles	Head Car Number		Number of Cars		Equipment	N/A								
	N/A		N/A											
Description	An FWSO team member performed a platform observation of track bed, cover board, Emergency Trip Station (ETS) lights, train approach warning lights, drainage, and general conditions.								Number of Defects		2			
									Recommended Finding?		Yes			
									Remedial Action Required?		Yes			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.10 15:53:15 -0500	Date
Inspector in Charge - Name	Adam A. Giovando		Inspection Team	Lee Emard



	<p><b>The following non-color-coded defects were observed:</b></p> <ul style="list-style-type: none"> <li>• <b>TRST 1000 defect 13.5.7:</b> Track 2, at Huntington Station (C15), no cover on end approach at west end of station.</li> <li>• <b>TRST 1000 defect 13.5.7:</b> Track 2, in Huntington Station (C15), two third rail cover sections were missing in the center of the station.</li> </ul> <p><b>Other Notable Observations:</b></p> <ul style="list-style-type: none"> <li>• Track 1, in Eisenhower Ave Station (C14), 74 of the approach warning lights on the platform were not working.</li> <li>• Track 2, in Eisenhower Ave Station (C14), two of the approach warning lights on the platform were not working.</li> <li>• Track 1, in King Street Station (C13), 10 of the approach warning lights on the platform were not working.</li> <li>• Track 2, in King Street Station (C13), 14 of the approach warning lights on the platform were not working.</li> <li>• Track 1, in Braddock Road Station (C12), 55 of the approach warning lights on the platform were not working.</li> <li>• Track 2, in Braddock Road Station (C12), 75 of the approach warning lights on the platform were not working.</li> <li>• Track 1, in Ronald Regan National Airport Station (C10), 113 of the approach warning lights on the platform were not working.</li> <li>• Track 2, in Ronald Regan National Airport Station (C10), 78 of the approach warning lights on the platform were not working.</li> <li>• Track 3, in Ronald Regan National Airport Station (C10), 90 of the approach warning lights on the platform were not working.</li> <li>• Track 1, in Arlington Cemetery Station (C06), 35 of the approach warning lights on the platform were not working.</li> <li>• Track 2, in Arlington Cemetery Station (C06), 56 of the approach warning lights on the platform were not working.</li> </ul>	<p><b>Recommended Reinspection?</b></p>	<p>Yes</p>
<p><b>Remedial Action</b></p>	<p>To achieve compliance with WMATA's requirements:</p> <ul style="list-style-type: none"> <li>• WMATA must replace the cover board on west end approach at Huntington Station (C15).</li> <li>• WMATA must replace two sections of missing cover board in the middle of Huntington Station (C15).</li> </ul>		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170706-WMATA-AG-3		
	2017	07	06				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RTRA	Sub-Department	ROCC
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Rail Operations Control Center (ROCC) 3500 Pennsy Drive Landover, MD 20785						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	ROCC-RC-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

### Activity Summaries

Inspection Activity #	1	Inspection Subject	ROCC Rules Compliance Observation				Activity Code		ROCC	RC	OBS
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	N/A	Out Brief Conducted	Yes	Time	1000-1430	Outside Shift	No	
Related Reports	Safety Management Inspection (SMI), Final Report, June 17, 2015		Related CAPS / Findings		Required Actions: R-1-6-a, R-1-6-b; R-1-9-a						
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	MSRPH	Section 1 – General Rules (Radio Usage and Operation): Rules 1.69 – 1.88									
	RWPM	Permanent Orders: No. T-16-10, No. R-17-03, & No. R-17-02									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
				X							
Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)	From			To			
					N/A			N/A			
Vehicles	Head Car Number		Number of Cars		Equipment		N/A				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.10 15:57:26 -05'00'	Date
Inspector in Charge – Name Adam Giovando	Inspection Team Chris DiFatta			



	N/A	N/A			
<p><b>Description</b></p>	<p><b>Overview:</b></p>			<p><b>Number of Defects</b></p>	<p>0</p>
	<p>FWSO Inspector conducted a Rules Compliance observation at the Rail Operations Control Center (ROCC). The inspector observed radio activities on Operations (Ops) Console 2 for compliance with the Metrorail Safety Rules and Procedures Handbook (MSRPH), as well as permanent orders that govern roadway access activities and radio procedures. The inspector also observed other ROCC procedures and noted RTC's overall performance and response to incidents that took place during the shift.</p>			<p><b>Recommended Finding?</b></p>	<p>No</p>
	<p><b>Radio Procedures and Protocols:</b></p>			<p><b>Remedial Action Required?</b></p>	<p>No</p>
	<p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector observed the rail traffic controllers (RTC) during each radio broadcast. The RTC acknowledged all radio requests and ended each transmission with "over" and used "out" when the communication loop concluded.</li> <li>○ The RTCs coordinated between the field portable track units, train operators, station managers, and each other to monitor revenue service. They ensured that maintenance personnel were aware of anomalies and operating conditions that may potentially impact their roadway access requests and inspections.</li> <li>○ The RTCs employed International Civil Aviation Organization (ICAO) standards for transmissions involving power requests and alphanumeric station identification.</li> <li>○ The RTCs ensured each unit or operator acknowledged each operating instruction, clearance, and transmission with 100 percent word-for-word read back.</li> <li>○ The RTCs made clear and appropriate radio broadcasts that informed personnel of all operational anomalies and established roadway access protection in place (e.g., foul time).</li> </ul> <p><b>Documentation and Checklists:</b></p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector reviewed all required documentation checklists regarding roadway access and foul time, noting that the RTC maintained a written log of all personnel on the roadway with recorded all call-on/call-off times, level of protection, and other required information to manage and monitor access and coordination.</li> <li>○ The foul time checklists were properly filled out in accordance with Metro rules and permanent orders. This included time and location of access, the establishment of red signal and prohibit exits, human form, and blocked track; and trains restricted and/or affected by each request.</li> <li>○ An FWSO Inspector observed two relieving RTCs at the Ops 2 console each electronically sign onto the Advanced Information Management (AIM) System screen at the beginning of their shift, as well as initial the log book (paper records), acknowledging defects and anomalies on the line. The RTCs also verbally exchanged operating conditions and anomalies upon each transfer of duties.</li> </ul> <p><b>Roadway Access:</b></p> <p>The FWSO Inspector observed the RTC radio performance and other required duties associated with RWP access requests for five work crews on the Ops 1 Console commencing at 1000 hours. There were seven foul time (FT) requests made for the crews' level of protection during the observation period. The RTC was compliant with Permanent Order No. R-17-02 (Granting Foul Time) and Permanent Order No. R-17-03 (Advanced Mobile Flagger [AMF]).</p> <ul style="list-style-type: none"> <li>○ The personnel followed proper radio protocol when they called on/off over the radio. This included identification of self and work crew, the location of foul time request (station or chain marker), and the reason for the request.</li> <li>○ Personnel acknowledged location and presence of AMFs required for each access request.</li> </ul> </p>			<p><b>Recommended Reinspection?</b></p>	<p>No</p>



	<ul style="list-style-type: none"><li>○ The RTCs established and broadcasted all red signals and “prohibit exits,” as well as human form and blue block track, via the AIM system as required by each level of protection.</li><li>○ The RTC required 100 percent and word-for-word repeat backs for all requests, ensuring the track units were in receipt of and repeated back full instructions and clearance. An FWSO Inspector observed one communication loop where the controller requested a repeat-back from the unit three times until the unit was able to cite his FT instructions back to the RTC verbatim.</li><li>○ The RTC contacted the train in the vicinity regarding all FT requests; making general announcements for all other access clearances and locations.</li><li>○ The RTC properly broadcast all on/off times for general and foul time requests.</li></ul> <p><b>The FWSO Inspector did not note any ROCC rules compliance defects.</b></p>		
<b>Remedial Action</b>	N/A		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170707-WMATA-AG-1		
	2017	07	07				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RTRA	Sub-Department	ROCC
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Rail Operations Control Center (ROCC) 3500 Pennsy Drive Landover, MD 20785						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	ROCC-RC-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

### Activity Summaries

Inspection Activity #	1	Inspection Subject	ROCC Rules Compliance Observation				Activity Code		ROCC	RC	OBS
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	N/A		Out Brief Conducted	Yes	Time	1400-1900	Outside Shift	Yes
Related Reports	Safety Management Inspection (SMI), Final Report, June 17, 2015		Related CAPS / Findings		Required Actions: R-1-6-a, R-1-6-b; R-1-9-a						
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	MSRPH	Section 1 – General Rules (Radio Usage and Operation): Rules 1.69 – 1.88									
	RWPM	Permanent Orders: No. T-16-10, No. R-17-03, and No. R-17-02									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
				X							
Line(s)	N/A		Track Number	N/A		Chain Marker and/or Station(s)	From		To		
							N/A		N/A		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, o=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.10 15:59:13 -05'00'	Date
Inspector in Charge – Name Adam Giovando	Inspection Team Chris DiFatta			





Vehicles	Head Car Number	Number of Cars	Equipment	N/A	
	N/A	N/A			
<b>Description</b>	<p><b>Overview:</b> An FWSO Inspector conducted a Rules Compliance observation at the Rail Operations Control Center (ROCC). The inspector observed radio activities on Operations (Ops) Console 1 for compliance with the Metrorail Safety Rules and Procedures Handbook (MSRPH), as well as permanent orders that govern roadway access activities and radio procedures. The inspector also observed other ROCC procedures and noted the RTC's overall performance and response to incidents that took place during the shift.</p> <p><b>Radio Procedures and Protocols:</b></p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector observed the rail traffic controllers (RTCs) during each radio broadcast. The RTC acknowledged all radio requests and ended each transmission with "over" and used "out" when the communication loop concluded.</li> <li>○ The RTCs coordinated between the field portable track units, train operators, station managers, and each other to monitor revenue service. They ensured that maintenance personnel were aware of anomalies and operating conditions that may potentially impact their roadway access requests and inspections.</li> <li>○ The RTCs employed International Civil Aviation Organization (ICAO) standards for transmissions involving power requests and alphanumeric station identification.</li> <li>○ The RTCs ensured each unit or operator acknowledged each operating instruction, clearance, and transmission with 100 percent word-for-word read back.</li> <li>○ The RTCs made clear and appropriate radio broadcasts that informed personnel of all operational anomalies and established roadway access protection in place (e.g., foul time).</li> </ul> <p><b>Documentation and Checklists:</b></p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector reviewed all required documentation checklists regarding roadway access and foul time, noting that the RTC maintained a written log of all personnel on the roadway with recorded all call-on/call-off times, level of protection, and other required information to manage and monitor access and coordination.</li> <li>○ The foul time checklists were properly filled out in accordance with Metro rules and permanent orders. This included time and location of access, the establishment of red signal and prohibit exits, human form, blocked track, and trains restricted and/or affected by each request.</li> <li>○ The FWSO Inspector observed two relieving RTCs at the Ops 1 Console. Each electronically signed onto the Advanced Information Management (AIM) System screen at the beginning of their shift, as well as initialed the logbook (paper records), acknowledging defects and anomalies on the line. The RTCs also verbally exchanged operating conditions and anomalies upon each transfer of duties.</li> </ul> <p><b>The FWSO Inspector did not note any ROCC rules compliance defects.</b></p>			<b>Number of Defects</b>	0
				<b>Recommended Finding?</b>	No
				<b>Remedial Action Required?</b>	No
				<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A				



# Inspection Form

## Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170707-WMATA-AG-2		
	2017	07	07				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RTRA	Sub- Department	ROCC
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Rail Operations Control Center (ROCC) 3500 Pennsy Drive Landover, MD 20785						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	ROCC-RC-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

### Activity Summaries

Inspection Activity #	1	Inspection Subject	ROCC Rules Compliance Observation				Activity Code		ROCC	RC	OBS
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	N/A	Out Brief Conducted	Yes	Time	1100-1500	Outside Shift	No	
Related Reports	Safety Management Inspection (SMI), Final Report, June 17, 2015		Related CAPS / Findings		Required Actions: R-1-6-a, R-1-6-b; R-1-9-a						
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	MSRPH	Section 1 – General Rules (Radio Usage and Operation): Rules 1.69 – 1.88									
	RWPM	Permanent Orders: No. T-16-10, No. R-17-03, and No. R-17-02									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
				X							
Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)		From		To			
						N/A		N/A			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.10 16:02:09 -05'00'	Date	ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO
Inspector in Charge – Name	Adam Giovando	Inspection Team	Tamara Powell		



Vehicles	Head Car Number	Number of Cars	Equipment	N/A	
	N/A	N/A			
<p><b>Description</b></p>	<p>FWSO Inspector conducted a Rules Compliance observation at the Rail Operations Control Center (ROCC). The inspector observed radio activities on the Operations (Ops) 1 Console, Red Line, for compliance with the Metrorail Safety Rules and Procedures Handbook (MSRPH), as well as permanent orders that govern roadway access activities and radio procedures. The inspector also observed other ROCC procedures and noted the rail traffic controller's (RTC's) overall performance and response to incidents that took place during the shift. Finally, the FWSO Inspector observed assistant superintendents conduct safety briefings and boot camp with the RTC's on the afternoon shift, by sitting in for each employee who received a one-on-one meeting.</p> <p><b>Radio Procedures and Protocols:</b></p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector observed the RTC during each radio broadcast.</li> <li>○ The RTC acknowledged all radio requests, and ended each transmission with "over" and "out" until the communication loop concluded.</li> <li>○ The RTCs coordinated between the field portable track units, train operators, station managers, and each other to monitor revenue service. They ensured that maintenance and field personnel were aware of anomalies and operating conditions that may potentially impact their roadway access requests, inspections, and service delivery.</li> <li>○ The RTCs employed International Civil Aviation Organization (ICAO) standards for radio transmissions and notification phone calls involving power requests and alphanumeric station identification.</li> <li>○ The RTCs ensured each unit or operator acknowledged each operating instruction, clearance, and transmission with 100 percent word-for-word read back.</li> <li>○ The RTCs made clear and required radio broadcasts that informed personnel of all operational anomalies and established roadway access protection in place (e.g., foul time).</li> </ul> <p><b>Documentation and Checklists:</b></p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector reviewed all required checklists regarding roadway access and foul time.</li> <li>○ The RTCs maintained a written log of all personnel on the roadway ("<i>Maintenance Access Form</i>") with recorded all call-on/call-off times, the level of protection, and other required information to manage and monitor access and coordination.</li> <li>○ Foul time checklists were properly filled out in accordance with Metro rules and permanent orders. This included time and location of access, the establishment of red signal and prohibit exits, human form and blocked track, and trains restricted and/or affected by each request.</li> <li>○ The FWSO Inspector observed two transfer shifts at the Ops 1 Console. Relieving RTCs electronically signed into Advanced Information Management (AIM) System screen at the beginning of their shift, and also initialed the logbook ("<i>ROCC Daily Activity Log</i>") acknowledging defects and anomalies on the line.</li> <li>○ The RTCs also verbally exchanged operating conditions and anomalies upon each transfer of duties.</li> </ul> <p><b>Roadway Access:</b></p> <p>The FWSO Inspector observed the RTC radio performance and other required duties associated with RWP access requests for seven work crews on the Ops 1 Console, commencing at 1100 hours. There were three foul time requests made during the observation period. The RTCs were compliant with Permanent Order No. R-17-02 (Granting Foul Time) and Permanent Order No. R-17-03 (Advanced Mobile Flagger [AMF]).</p> <ul style="list-style-type: none"> <li>○ The personnel followed proper radio protocol when they called on/off over the radio. This included identification of self and work crew, the location of foul time request (station or chain marker), and the reason for the request.</li> </ul>			<p><b>Number of Defects</b></p>	0
				<p><b>Recommended Finding?</b></p>	No
				<p><b>Remedial Action Required?</b></p>	No
				<p><b>Recommended Reinspection?</b></p>	No



	<ul style="list-style-type: none"><li>○ Personnel acknowledged location and presence of AMFs required for each access request.</li><li>○ The RTCs established and broadcasted all red signals and “prohibit exits,” as well as human form and blue block track, via the AIM system as required by each level of protection.</li><li>○ The RTC required 100 percent and word-for-word repeat backs for all requests, ensuring the track units were in receipt of and repeated back full instructions and clearance.</li><li>○ The RTC properly broadcast all on/off times for all access requests.</li></ul> <p><b>The FWSO Inspector did not note any ROCC rules compliance defects.</b></p>		
<b>Remedial Action</b>	N/A		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170707-WMATA-AG-3		
	2017	07	07				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	POWR	Sub-Department	CM
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Crystal City (C09), track 1, and Crystal City Traction Power Substation (TPSS)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-JSB-OBS	TP-RM-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	0				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	No				
Recommended Reinspection	No	No				

### Activity Summaries

Inspection Activity #	1	Inspection Subject					Crystal City (C09) – Safety Briefing			Activity Code		TP	JSB	OBS
Job Briefing Employee Name/Title	WMATA RWIC				Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	0100-0500	Outside Shift	Yes		
Related Reports					Related CAPS / Findings									
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard			Other / Title		Checklist Reference				
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X							X						
Line(s)	C-Line	Track Number	N/A		Chain Marker and/or Station(s)		From			To				
							N/A			N/A				
Vehicles	Head Car Number		Number of Cars		Equipment			N/A						
	N/A		N/A											
Description	FWSO personnel received a job safety briefing from the WMATA roadway worker in charge (RWIC). All personal protective equipment (PPE) and roadway worker protection (RWP) IDs were checked and the working limits were reviewed. The								Number of Defects		0			
									Recommended Finding?		No			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.13 08:55:00 -05'00'	Date	
Inspector in Charge – Name	Adam Giovando	Inspection Team	Tino Sahoo		



		<p>WMATA RWIC covered the nearest hospital and safety rule of the day. The hot spots, hazards, clearance areas, communication, and Roadway Access Guide were used as part of the discussion.</p> <p><b>The FWSO Inspector did not note any defects.</b></p>									
<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Crystal City (C09) Pulling in positive feeder cable (1000 kcmil, 2 kV)			<b>Activity Code</b>		TP	RM	OBS	
<b>Job Briefing Employee Name/Title</b>	WMATA RWIC		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	0100-0500	<b>Outside Shift</b>	Yes	
<b>Related Reports</b>			<b>Related CAPS / Findings</b>								
<b>Related Rules, SOPs, Standards, or Other</b>	<b>Ref</b>	<b>Rule or SOP</b>	<b>Standard</b>			<b>Other / Title</b>		<b>Checklist Reference</b>			
	ENGINEERING MODIFICATION INSTRUCTIONS (EMI) FOR JUMPER, EXPANSION, AND TRANSITION POWER CABLES REPLACEMENT SYSTEMWIDE (REVISION 2, SEPTEMBER 16, 2016)										
	PREVENTIVE MAINTENANCE INSPECTION (PMI) FOR TRACK FEEDER CABLE - 1000 KCMIL / 1500 KCMIL (REVISION 4, JUNE 16, 2015)										
<b>Inspection Location</b>	<b>Main Track</b>	<b>Yard</b>	<b>Station</b>	<b>OCC</b>	<b>RTA Facility</b>	<b>FTA Office</b>	<b>Track Type</b>	<b>At-grade</b>	<b>Tunnel</b>	<b>Elevated</b>	<b>N/A</b>
	X							X			
<b>Line(s)</b>	C-Line	<b>Track Number</b>	track 1	<b>Chain Marker and/or Station(s)</b>	<b>From</b>			<b>To</b>			
					CM 317+00			CM 317+00			
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	Positive feeder cable (1000 kcmil, 2 kV)					
	N/A		N/A								
<b>Description</b>	<p>FWSO Inspectors observed WMATA's power department and electrical contractors performing the task of pulling a positive feeder cable from the Crystal City TPSS to trackside. The cable was successfully pulled 130 feet. The cable was also meggered and within the proper tolerance.</p> <p>During the inspection, the FWSO Inspectors observed the contractor pulling and standing off the ground the positive feeder cable per the Engineering Modification Instruction (EMI) for jumper, expansion, and transition power cables replacement system wide, issued September 16, 2016. The FWSO Inspectors observed the contractor meggering the positive feeder cable. The cable had the minimum insulation resistance listed in the Preventive Maintenance Inspection for Track Feeder Cable – 1000 KCMIL/1500 KCMIL, issued June 16, 2015.</p> <p><b>The FWSO Inspector and WMATA personnel did not note any defects during the replacement process.</b></p>						<b>Number of Defects</b>		0		
							<b>Recommended Finding?</b>		No		
							<b>Remedial Action Required?</b>		No		
							<b>Recommended Reinspection?</b>		No		
<b>Remedial Action</b>	N/A										



# Inspection Form

## Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170707-WMATA-AG-4		
	2017	07	07				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	POWR	Sub-Department	CBL. IN.
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	L'Enfant Plaza (F03) to Anacostia (F06) - Track 1						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-JSB-OBS	TP-WI-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	5				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	No				
Recommended Reinspection	No	No				

### Activity Summaries

Inspection Activity #	1	Inspection Subject	L'Enfant Plaza - Job Safety Briefing (Mobile Work Crew)				Activity Code	TP	JSB	OBS	
Job Briefing Employee Name/Title	WMATA RWIC		Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000-1400	Outside Shift	No	
Related Reports	N/A		Related CAPS / Findings	N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP	Standard		Other / Title		Checklist Reference				
	WMATA PERMANENT ORDER R-17-03 ADVANCE MOBILE FLAGGER (FRIDAY APRIL 28, 2017)										
	RWPM										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X								X		
Line(s)	F-Line	Track Number	track 1	Chain Marker and/or Station(s)		From		To			
						N/A		N/A			
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.13 08:52:58 -05'00'	Date
Inspector in Charge - Name	Adam Giovando		Inspection Team	Tino Sahoo and Lee Emard



<b>Description</b>	<p>FWSO personnel received a job safety briefing from the WMATA roadway worker in charge (RWIC). All personal protective equipment (PPE) and roadway worker protection (RWP) IDs were checked and the working limits were reviewed. The WMATA RWIC covered the nearest hospital and safety rule of the day. The hot spots, hazards, clearance areas, communication, and Roadway Access Guide were used as part of the discussion.</p> <p>In addition to the required PPE, the Advanced Mobile Flagger (AMF) did have the required equipment, and was compliant with "WMATA PERMANENT ORDER R-17-03 ADVANCE MOBILE FLAGGER (FRIDAY APRIL 28, 2017)." This equipment consisted of WMATA-approved flashing amber lantern/E-flare, orange flag (18'x18') calibrated working radio, air horn, and whistle.</p> <p>The AMF did notify the RWIC via positive communication (phone) that he was in place (next station ahead in the direction the mobile crew walked) and the flashing amber lantern /E-flare and orange flag had been positioned at the end of the platform (8 car marker or end gate). No exceptions were taken.</p> <p><b>The FWSO Inspector did not note any defects.</b></p>	<b>Number of Defects</b>	0
		<b>Recommended Finding?</b>	No
		<b>Remedial Action Required?</b>	No
		<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Walking Observation (Cable Inspection)			<b>Activity Code</b>	TP	WI	OBS		
<b>Job Briefing Employee Name/Title</b>	WMATA RWIC		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	1000-1400	<b>Outside Shift</b>	No	
<b>Related Reports</b>	N/A		<b>Related CAPS / Findings</b>	N/A							
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP	Standard		Other / Title		Checklist Reference				
	TRACK AND STRUCTURES DIVISION – TRST 1000 TRACK MAINTENANCE AND INSPECTION MANUAL (REVISION 7, MARCH 2017)										
	TRACTION POWER DESIGN DRAWING (DD-TP-SSI-013, REVISION 0, AUGUST 2001)										
	ENGINEERING MODIFICATION INSTRUCTIONS (EMI) FOR JUMPER, EXPANSION, AND TRANSITION POWER CABLES REPLACEMENT SYSTEMWIDE (REVISION 2, SEPTEMBER 16, 2016)										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X								X		
<b>Line(s)</b>	F-Line	<b>Track Number</b>	track 1	<b>Chain Marker and/or Station(s)</b>	From		To				
					L'Enfant Plaza (F03)		Anacostia (F06)				
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A					
	N/A		N/A								
<b>Description</b>	Daily cable inspections are part of the holistic approach WMATA has instituted to prevent cable fires and arcing incidents. The pictures taken and issues noted were entered into a database for nighttime cable repair crews to fix.							<b>Number of Defects</b>	5		
								<b>Recommended Finding?</b>	Yes		
								<b>Remedial Action Required?</b>	Yes		
	<p><b>The following new defects were observed, and there were no color-coded conditions noted:</b></p> <ul style="list-style-type: none"> <li>TRST 1000, defect 3.2.2.1: Standing water surrounding 3<sup>rd</sup> rail insulators at F1 81+00. (See Figure 1.)</li> <li>TRST 1000, defect 3.2.2.1: Trough/invert drain clogged from F1 081+00 to F1 083+00.</li> </ul>							<b>Recommended Reinspection?</b>	Yes		





	<ul style="list-style-type: none"><li>• TRST 1000 Manual, 3.2.2.1: Standing water surrounding power feeder cable conduit stub-ups at F1 144+00. (See Figure 2.)</li><li>• TRST 1000 Manual, 3.2.2.4: Water leaking from tunnel ceiling onto 3<sup>rd</sup> rail cover board at F1 174+50. (See Figure 3.)</li><li>• TRST 1000 Manual, 13.5.7: No cover on end approach at F1 169+00.</li></ul> <p><b>Other Notable Observations:</b></p> <ul style="list-style-type: none"><li>• F1 053+00 – Trash and debris surrounding power feeder cable conduit stub-ups.</li><li>• F1 105+00 – Expansion cables need better support for standing off the tunnel wall.</li></ul>		
<b>Remedial Action</b>	To achieve compliance with WMATA's requirements: <ul style="list-style-type: none"><li>• WMATA must mitigate water intrusion and clear standing water at F1 81+00.</li><li>• WMATA must mitigate water intrusion and clean out trough/invert drain between F1 81+00 and F1 83+00.</li><li>• WMATA must mitigate water intrusion and clear standing water at F1 144+00.</li><li>• WMATA must mitigate water intrusion F1 174+50.</li><li>• WMATA must replace cover board over the end approach F1 169+00.</li></ul>		



FIGURE 1 – F1 081+00 – STANDING WATER SURROUNDING 3<sup>RD</sup> RAIL INSULATORS.



FIGURE 2 – F1 144+00 – STANDING WATER SURROUNDING POWER FEEDER CABLE CONDUIT STUB-UPS.



FIGURE 3 – F1 174+50 – WATER LEAKING FROM TUNNEL CEILING ONTO 3<sup>RD</sup> RAIL COVER BOARD.



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170708-WMATA-AG-1		
	2017	07	08				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	C- Line and J-Line, track 1, between King Street (C13) and Van Dorn Street Station (J02)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	5				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

### Activity Summaries

Inspection Activity #	1	Inspection Subject			Roadway Worker Protection – Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	RWIC, TRST Unit 6034 AMF, TRST Unit # 6001			Accompanied Inspector?	No	Out Brief Conducted	No	Time	0900 1400	Outside Shift	No	
Related Reports	N/A			Related CAPS / Findings		N/A						
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP			Standard			Other / Title		Checklist Reference		
	RWPM											
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A	
	X		X					X				
Line(s)	C-Line and J-Line	Track Number	track 1		Chain Marker and/or Station(s)	From		To				
						King Street (C13)		Van Dorn Street (J02)				
Vehicles	Head Car Number		Number of Cars		Equipment	N/A						
	N/A		N/A									

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFWorthTX, ou=DOT FRAFWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.11 09:03:50 -05'00'	Date
Inspector in Charge – Name	Adam A. Giovando		Inspection Team	Lee Emard



<b>Description</b>	The job safety briefing was provided by TRST unit #6034 at the King Street Station. The briefing was thorough and fully compliant with WMATA's Roadway Worker's Protection Manual (RWPM) requirements. It included WMATA level-1 ID check, type of protection, train approach warning (TAW), potential hazards, hot spots, hospital locations, and safety rule of the day.  <b>No exceptions were taken with the job safety briefing.</b>	<b>Number of Defects</b>	0
		<b>Recommended Finding?</b>	No
		<b>Remedial Action Required?</b>	No
		<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Track Inspection Observation				<b>Activity Code</b>		TRK	WI	OBS
<b>Job Briefing Employee Name/Title</b>	RWIC, TRST Unit 6034			<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	0900 1400	<b>Outside Shift</b>	No
<b>Related Reports</b>	Safety Directive 15-1			<b>Related CAPS / Findings</b>		CAP: 2-18-A and 2-19-A					
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard			Other / Title		Checklist Reference		
	TRST-1000 rev. 6										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X		X					X			
<b>Line(s)</b>	C-Line and J-Line	<b>Track Number</b>	track 1		<b>Chain Marker and/or Station(s)</b>	From			To		
						King Street (C13)			Van Dorn Street (J02)		
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A					
	N/A		N/A								
<b>Description</b>	The FWSO Inspector performed an observation of a WMATA track inspection team on track one of the C-Line and J-Line between King Street and Van Dorn Street stations.  <b>The following non-color-coded defects were observed:</b> <ul style="list-style-type: none"> <li><b>TRST 1000 defect 13.5.7:</b> No cover on end approach at J1 640 +00.</li> <li><b>TRST 1000 defect 10.18:</b> The trackside heater control panel HC-J01-31A5 cabinet door was broken off and the box was smashed leaving wires exposed to elements at J1 557+00.</li> <li><b>TRST 1000 defect 3.1.2.5:</b> The emergency trip station (ETS) light on the cabinet box was not working at J1 680+00.</li> <li><b>Permanent Order T-16-07:</b> At 1016 hours, the train operator did not acknowledge the track crew working on the track, blow the horn or appear to slow down from operating speed while passing the work group on track 1, at J1 517+00. Remedial Action for this defect is addressed in WMATA's approach to R-2-18-A and R-2-19-A.</li> <li><b>Permanent Order T-16-07:</b> At 1038 hours, the train operator acknowledged the track crew working on the track and blew the horn, but did not appear to slow down from operating speed while passing the work group on track 1, at J1 54+00. Remedial Action for this defect is addressed in WMATA's approach to R-2-18-A and R-2-19-A.</li> </ul>						<b>Number of Defects</b>	5			
							<b>Recommended Finding?</b>	Yes			
							<b>Remedial Action Required?</b>	Yes			
							<b>Recommended Reinspection?</b>	Yes			
<b>Remedial Action</b>	To achieve compliance with WMATA's Requirements: <ul style="list-style-type: none"> <li>WMATA must replace the cover board on the end approach at J1 640+00.</li> <li>WMATA must repair the electrical box at J1 557+00.</li> <li>WMATA must repair the ETS light at J1 680+00.</li> </ul>										



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170709-WMATA-AG-1		
	2017	07	09				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Switches at Franconia-Springfield (J03) and Alexandria Yard Lead (C98) Interlockings						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	8				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Roadway Worker Protection – Job Safety Briefing				Activity Code	TRK	JSB	OBS	
Job Briefing Employee Name/Title	TRST Unit 6044		Accompanied Inspector?	No	Out Brief Conducted	No	Time	0800 1400	Outside Shift	No	
Related Reports	N/A		Related CAPS / Findings	N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	RWPM										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X							X		X	
Line(s)	C-Line and J-Line	Track Number	tracks 1 and 2	Chain Marker and/or Station(s)	From			To			
					Franconia-Springfield (J03)			Yard Lead Interlocking (C98)			
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								
Description	The job safety briefing was provided by TRST unit #6344 at Franconia-Springfield Station. The briefing was thorough and fully compliant with WMATA's Roadway						Number of Defects		0		
							Recommended Finding?		No		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>	Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.11 15:44:48 -05'00'	Date
Inspector in Charge - Name	Adam Giovando	Inspection Team	Lee Emard



	Worker's Protection Manual (RWPM) requirements. It included WMATA level-1 ID check, type of protection, train approach warning (TAW), potential hazards, hot spots, hospital locations, and safety rule of the day.  <b>No exceptions were taken with the job safety briefing</b>	<b>Remedial Action Required?</b>	No
		<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Track Inspection Observation				<b>Activity Code</b>		TRK	WI	OBS
<b>Job Briefing Employee Name/Title</b>	RWIC, TRST Unit 6344		<b>Accompanied Inspector</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	0800 1400	<b>Outside Shift</b>	No	
<b>Related Reports</b>	N/A		<b>Related CAPS / Findings</b>		N/A						
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	TRST-1000 rev. 6										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X							X		X	
<b>Line(s)</b>	J-Line and C-Line	<b>Track Number</b>	track 1 and 2	<b>Chain Marker and/or Station(s)</b>			From		To		
							Franconia-Springfield (J03)		Yard Lead Interlocking (C98)		
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A					
	N/A		N/A								

<p>An FWSO Inspector performed an observation of a WMATA mainline switch inspection team on tracks one and two of crossovers J03/J02 and J01/C98. Switches inspected were: C98 1A, 3B, 5B, J03 11B, 11A, 9, 3B, 1B, 3A, and 1A.</p> <p><b>The FWSO Inspector observed the following Red color-coded defect:</b></p> <ul style="list-style-type: none"> <li><b>TRST 1000 defect table 11-3 Track Surface Standards.</b> A deviation in crosslevel over 32 feet of 1½ inch was observed at C98, switch 3B, on track 2. This required a medium-slow order; also combined with four consecutive frog plates with missing or loose lag screws. Note that switch 3B was found in a red condition with a loose bolt at the heel block, missing cotter pin, and two loose bolts at the heel of frog. These conditions were corrected by WMATA employees while the FWSO Inspector was present.</li> </ul> <p><b>The following non-color-coded defects were observed:</b></p> <ul style="list-style-type: none"> <li><b>TRST 1000 defect, Table 9-3: Worn Tread of Frog Casting Standards.</b> Frog at J03, switch 1B, track 2: Frog showed excessive wear on flangeway wings of 1/8 inch.</li> <li><b>TRST 1000 defect 9.22.2.</b> Frog at J03, switch 3B, track 2: The FWSO Inspector observed three chips broken out of frog point measuring ¼ inch.</li> <li><b>TRST 1000 defect 9.27.3.</b> Frog at J03, switch 3B, track 2: The FWSO Inspector observed five missing clips on the joints at the toe of the frog.</li> <li><b>TRST 1000 defect 13.5.7.</b> No cover on end approach on track 1, CM 870+00, switch 1A.</li> <li><b>TRST 1000 defect 9.27.3.</b> Frog at J03, switch 1A, track 1: The FWSO Inspector observed five missing clips on the joints at the toe of the frog.</li> <li><b>TRST 1000 defect 9.27.3.</b> Frog at J03, switch 3A, track 1: The FWSO Inspector observed six missing clips on the joints at the toe of the frog.</li> <li><b>TRST 1000 defect, Tables 9-4 and 9-5: Chipped Point Standards.</b> C98, switch 1A: Switch point on the turnout side measured a chip in the</li> </ul>	<b>Number of Defects</b>	8
	<b>Recommended Finding?</b>	Yes
	<b>Remedial Action Required?</b>	Yes
	<b>Recommended Reinspection?</b>	Yes





	switch point 23 inches back from the point of switch 18 inches long and up to a 5/16 chip.		
<b>Remedial Action</b>	To achieve compliance with WMATA's requirements: <ul style="list-style-type: none"><li>• WMATA must surface at C98, switch 3B, on track 2, and correct fastener condition under frog.</li><li>• WMATA must weld frog wings at J03, switch 1B, on track 2, and bring back in tolerance.</li><li>• WMATA must weld frog point at J03, switch 3B, on track 2, and bring back in tolerance.</li><li>• WMATA must replace clips at J03, switch 3B, on track 2, at joint on toe of frog.</li><li>• WMATA must replace cover on end approach on track 1, CM 870+00, switch 1A.</li><li>• WMATA must replace clips at J03, switch 1A, on track 1, at toe-of-frog joints.</li><li>• WMATA must replace clips at J03, switch 3A, on track 1, at toe-of-frog joints.</li><li>• WMATA must replace the turnout switch point at C98, switch 1A.</li></ul>		



# Inspection Form

FOIA Exemption: All (b)(6)

## Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170711-WMATA-WP-1		
	2017	07	11				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RTRA	Sub-Department	ROCC
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Rail Operations Control Center (ROCC) 3500 Pennsy Drive Landover, MD 20785						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	ROCC-RC-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

### Activity Summaries

Inspection Activity #	1	Inspection Subject	ROCC Rules Compliance Observation				Activity Code	ROCC	RC	OBS	
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	N/A	Out Brief Conducted	Yes	Time	1000-1500	Outside Shift	No	
Related Reports	Safety Management Inspection (SMI), Final Report, June 17, 2015		Related CAPS / Findings	Required Actions: R-1-6-a, R-1-6-b; R-1-9-a							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	MSRPH	Section 1 – General Rules (Radio Usage and Operation): Rules 1.69 – 1.88									
	RWPM	Permanent Orders: No. T-16-10, No. R-17-03, and No. R-17-02									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
				X							
Line(s)	N/A		N/A		From			To			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		WINSLOW L. POWELL		Date	
Inspector in Charge – Name Winslow Powell		Inspection Team Tamara Powell		<small>Digitally signed by WINSLOW L. POWELL DN: c=US, o=U.S. Government, ou=FTAHQ, ou=DOT Headquarters, cn=WINSLOW L. POWELL Date: 2017.07.18 14:58:40 -0400</small>	





	Track Number	Chain Marker and/or Station(s)	N/A	N/A
<b>Vehicles</b>	Head Car Number N/A	Number of Cars N/A	<b>Equipment</b>	N/A
<b>Description</b>	<p>An FWSO Inspector conducted a Rules Compliance observation at the Rail Operations Control Center (ROCC). The inspector observed radio activities on Operations (Ops) 2 Console, Silver, Orange, and partial Blue lines, for compliance with the Metrorail Safety Rules and Procedures Handbook (MSRPH), as well as permanent orders and rules that govern roadway access activities and radio procedures. The inspector also observed other ROCC procedures and noted RTC's overall performance and response to incidents that took place during the shift.</p> <p><b>Radio Procedures and Protocols:</b></p> <ul style="list-style-type: none"> <li>The FWSO Inspector observed the rail traffic controllers (RTC) during each radio broadcast. The RTC acknowledged all radio requests and ended each transmission with "over."</li> <li><b>NOTE:</b> However, the controller did not say "out" on every transmission when the communication loop concluded. The FWSO Inspector informed the Assistant Superintendent, who was also aware of the result recorded during their RTC internal safety audits. This item was already noted on their safety briefing agenda that was conducted and reviewed with the RTCs at the beginning of the midday shift.</li> <li>The RTCs coordinated between the field portable track units, train operators, station managers, and each other to monitor revenue service. They ensured that maintenance personnel were aware of anomalies and operating conditions that may potentially impact their roadway access requests and inspections.</li> <li>The RTCs employed International Civil Aviation Organization (ICAO) standards for radio transmissions and phone calls with personnel involving power requests and alphanumeric station identification.</li> <li>The RTCs ensured each unit or operator acknowledged each operating instruction, clearance, and transmission with 100 percent word-for-word read back.</li> <li>The RTCs made clear and appropriate radio broadcasts that informed personnel of all operational anomalies and established roadway access protection in place.</li> </ul> <p><b>Documentation and Checklists:</b></p> <ul style="list-style-type: none"> <li>The FWSO Inspector reviewed all required checklists regarding roadway access and foul time.</li> <li>The RTCs maintained a written log of all personnel on the roadway ("<i>Maintenance Access Form</i>") with recorded all call-on/call-off times, the level of protection, and other required information to manage and monitor access and coordination.</li> <li>Foul time checklists were properly filled out in accordance with Metro rules and permanent orders. This included time and location of access, the establishment of red signal and prohibit exits, human form and blocked track, and trains restricted and/or affected by each request.</li> <li>The FWSO Inspector observed two transfer shifts for both controllers at the Ops 2 Console. Relieving RTCs electronically signed onto Advanced Information Management (AIM) System screen at the beginning of their shift, and initialed the log book ("<i>ROCC Daily Activity Log</i>") acknowledging defects and anomalies on the line.</li> <li>The RTCs also verbally exchanged operating conditions and anomalies upon each transfer of duties.</li> </ul> <p><b>Roadway Access:</b></p> <p>The FWSO Inspector observed the RTC radio performance and other required duties associated with RWP access requests for five work crews on the Ops 2 Console, commencing at beginning of shift. The FWSO Inspector observed compliance with two foul time requests made for the crews' level of protection. Both RTCs were compliant with Permanent Order No. R-17-02 (Granting Foul Time) and Permanent Order No. R-17-03 (Advanced Mobile Flagger [AMF]).</p>			<p><b>Number of Defects</b> 0</p> <p><b>Recommended Finding?</b> No</p> <p><b>Remedial Action Required?</b> No</p> <p><b>Recommended Reinspection?</b> No</p>



	<ul style="list-style-type: none"><li>○ The personnel followed proper radio protocol when they called on/off over the radio. This included identification of self and work crew, the location of foul time request (station or chain marker), and the reason for the request.</li><li>○ Personnel acknowledged location and presence of AMFs required for each access request.</li><li>○ The RTCs established and broadcasted all red signals and “prohibit exits,” as well as human form and blue block track, via the AIM system as required by each level of protection (e.g., Train Approach Warning [TAW], foul time, etc.).</li><li>○ The RTC required 100 percent and word-for-word repeat backs for all requests, ensuring the track units were in receipt of and repeated back full instructions and clearance.</li><li>○ The RTCs properly broadcast all on/off times for all access requests.</li></ul> <p><b>The FWSO Inspector did not note any ROCC rules compliance defects.</b></p> <p><b>Other Notable Observations:</b></p> <ul style="list-style-type: none"><li>● FWSO inspector also met with the Superintendent of RTC Training regarding training schedule and progress of new RTCs. The Superintendent reported all trainees are engaged, and that training is presently going well. The FWSO Inspector will follow up again next week.</li></ul>		
<b>Remedial Action</b>	N/A		



# Inspection Form

FOIA Exemption: All (b)(6)  
Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170712-WMATA-AG-1		
	2017	07	12				
Rail Agency Name	Washington Metropolitan Area Transit Authority (WMATA)			Rail Agency Department	Car Maintenance (CMNT)	Sub- Department	Inspection
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Shady Grove Rail Service and Inspection Facility (A99)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	VM-SI-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	1					
Recommended Finding	Yes					
Remedial Action Required <sup>1</sup>	Yes					
Recommended Reinspection	Yes					

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Shop Observations – Shady Grove Rail Service and Inspection Facility				Activity Code	VM	SI	OBS	
Job Briefing Employee Name/Title	N/A	Accompanied Inspector?	No	Out Brief Conducted	Yes	Time	0730-1000	Outside Shift	No		
Related Reports	N/A	Related CAPS / Findings	N/A								
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP	Standard	Other / Title	Checklist Reference						
	N/A	Operating Instructions for the Car Hoist and Body Hoist for 4 and 5 South Dated December 7, 2016	N/A								
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
					X						
Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)	From			To			
					N/A			N/A			
Vehicles	Head Car Number		Number of Cars		Equipment	Car Hoist and Body Hoist					
	N/A		3168-3169 3226-3227								

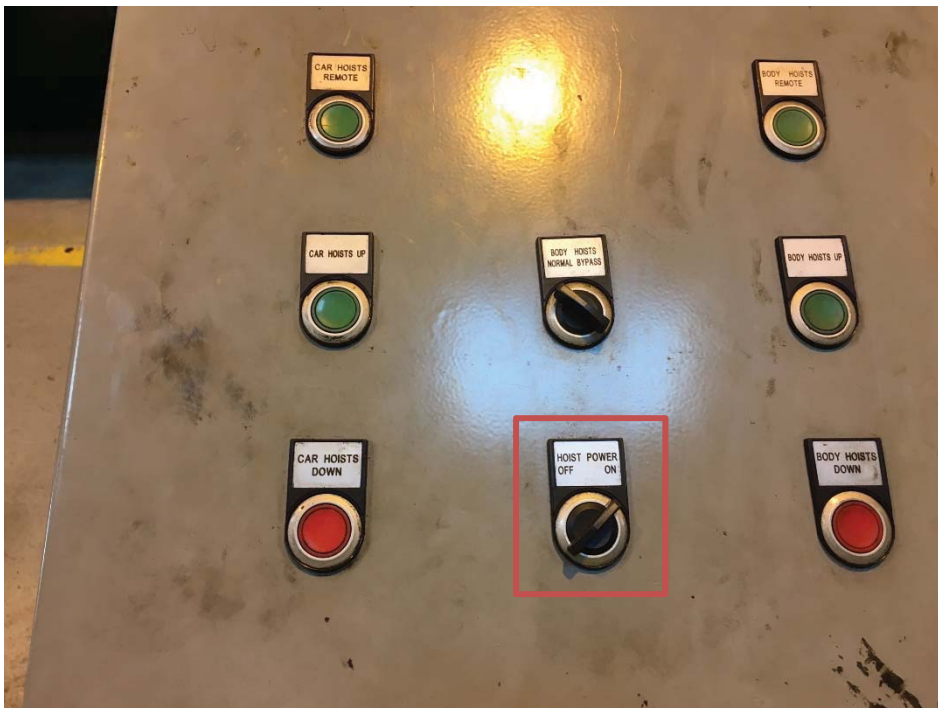
<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.14 11:25:05 -05'00'	Date	
Inspector in Charge – Name Adam Giovando	Inspection Team Bill Hultsch				



<b>Description</b>	<p>The FWSO Inspector observed a periodic “B” inspection being conducted on rail vehicles 3168 – 3169 as well as a periodic “A1” inspection on rail cars 3226 – 3227. Documentation used for these periodic maintenance activities was reviewed to determine if versions being used were current. Inspectors also reviewed the mechanics’ electronic access to maintenance documentation using MaximoPROD with Documentum.</p> <p>WMATA is currently updating their periodic maintenance manuals. Maintenance manuals being used for the 3000 series rail vehicles at the time of this inspection were dated 6/30/17. Maintenance manuals available for the 7000 series rail vehicles were dated 4/21/17. WMATA reported to inspectors that an update to the 7000 series manuals is expected in the next few days. The MaximoPROD system allows mechanics easy and ready access to maintenance documentation electronically, as well as access to work orders to review individual rail vehicle historical maintenance activities.</p> <p><b>The following non-color-coded defect was observed:</b></p> <p><b>Operating Instructions for Car Hoist and Body Hoist for 4 and 5 South:</b> Inspector observed a hoist power switch left in the on position on the Master Control Station for an unattended car hoist and body hoist. The FWSO Inspector reviewed the operating instructions hanging on the car hoist and body hoist for 4 and 5 South, dated December 7, 2016. The instructions stated the hoist power switch should be in the “off” position once the “up” or “down” operation is completed. (See Figure 1.) The FWSO Inspector advised the WMATA maintenance supervisor in attendance to this observation and he responded that he would address it.</p>	<b>Number of Defects</b>	1
		<b>Recommended Finding?</b>	Yes
		<b>Remedial Action Required?</b>	Yes
		<b>Recommended Reinspection?</b>	Yes
<b>Remedial Action</b>	<p>To achieve compliance with WMATA’s requirements:</p> <ul style="list-style-type: none"> <li>• WMATA must follow established procedures for hoisting railcars in service and inspection facilities.</li> </ul>		

**Photos:**



**Figure 1:** Hoist control panel power left on



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170712-WMATA-WP-1		
	2017	07	12				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RTRA	Sub-Department	ROCC
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Rail Operations Control Center (ROCC) 3500 Pennsy Drive Landover, MD 20785						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	ROCC-RC-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

### Activity Summaries

Inspection Activity #	1	Inspection Subject	ROCC and Maintenance Operations Center (MOC) Rules Compliance Observation				Activity Code	ROCC	RC	OBS	
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	N/A	Out Brief Conducted	Yes	Time	1230-1730	Outside Shift	No	
Related Reports	Safety Management Inspection (SMI), Final Report, June 17, 2015		Related CAPS / Findings	Required Actions: R-1-6-a, R-1-6-b							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	MSRPH	Section 1 – General Rules (Radio Usage and Operation): Rules 1.69 – 1.88									
	RWPM	Permanent Orders: No. T-16-10 and No. R-17-02									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
				X							

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		WINSLOW L. POWELL		Date
Inspector in Charge – Name Winslow Powell		Inspection Team Tamara Powell		

Digitally signed by WINSLOW L. POWELL  
DN: cn=US, o=U.S. Government, ou=FTA  
Date: 2017.07.21 12:26:20 -0400



Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)	From	To
					N/A	N/A
Vehicles	Head Car Number	Number of Cars		Equipment	N/A	
	N/A	N/A				
Description	<p>An FWSO Inspector conducted a Rules Compliance observation at the Rail Operations Control Center (ROCC). The inspector observed radio activities on Operations (Ops) 3 Console-Yellow and Green lines for compliance with the Metrorail Safety Rules and Procedures Handbook (MSRPH), as well as permanent orders and rules that govern roadway access activities and radio procedures. The inspector also attended a Rail Traffic Controller (RTC) safety briefing facilitated by the ROCC Assistant Superintendent and performed an observation/training of the Maintenance Operations Center (MOC) Assistant Superintendent.</p> <p><b>Radio Procedures and Protocols:</b></p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector observed the RTCs during each radio broadcast. The RTCs acknowledged and responded promptly to all radio requests, ending each transmission with “over” and “out” on the majority of transmissions. <b>NOTE:</b> The controller did not say “out” on every transmission when the communication loop concluded. (This was the result of some overlapping radio calls which came in from the field as the controller completed the previous one.)</li> <li>○ The RTCs coordinated between the field portable track units, train operators, station managers, as well as each other, to monitor service train headways.</li> <li>○ The RTCs employed International Civil Aviation Organization (ICAO) standards for radio transmissions and phone calls with personnel involving power requests and alphanumeric station identification.</li> <li>○ The RTCs ensured every unit or operator acknowledged each operating instruction, clearance, and transmission with 100 percent word-for-word read back.</li> <li>○ The RTCs made clear and appropriate radio broadcasts that informed personnel of all operational anomalies and established roadway access protection in place.</li> </ul> <p><b>Roadway Access:</b></p> <p>The FWSO Inspector observed the RTCs’ performance as well as other required duties associated with Roadway Worker Protection (RWP) access requests for two work crews on the Ops 3 Console. The inspector observed any foul time requests made for the crews’ level of protection. Both RTCs were compliant with the RWP manual, operating rules, and Permanent Order No. R-17-03 (Advanced Mobile Flagger [AMF]).</p> <ul style="list-style-type: none"> <li>○ The personnel followed proper radio protocol when they called on/off over the radio. This included identification of self and work crew, the location of access (station or chain marker), and the reason for the request.</li> <li>○ Personnel acknowledged location and presence of AMFs required for each access request.</li> <li>○ The RTCs established and broadcasted all red signals and “prohibit exits,” as well as human form and blue block track, via the Advanced Information Management (AIM) system, as required by each level of protection.</li> <li>○ The RTC required 100 percent and word-for-word repeat backs for all requests, ensuring the track units were in receipt of and repeated back full instructions and clearance.</li> <li>○ The RTCs properly broadcast all on/off times for all access requests.</li> </ul> <p><b>The FWSO Inspector did not note any ROCC rules compliance defects.</b></p> <p><b>Other Notable Observations:</b></p> <ul style="list-style-type: none"> <li>● The FWSO Inspector attended an RTC safety briefing conducted by the ROCC Assistant Superintendent. This briefing was conducted with all</li> </ul>				<b>Number of Defects</b>	0
					<b>Recommended Finding?</b>	No
					<b>Remedial Action Required?</b>	No
					<b>Recommended Reinspection?</b>	No



	<p>controllers on the afternoon shift, divided by duties (radio and buttons). Agenda items included: headways and On-time-Performance (OTP) percentages; scheduled shutdown; communications (reminder and review of Permanent Order T-16-10, e.g., "over" and "out" requirements; incident documentation, and electronic log roll-out. Specifically, Assistant Superintendent commended afternoon shift RTC's for OTP performance improvement.</p> <ul style="list-style-type: none"><li>• For the second half of same shift, the FWSO Inspector sat with the MOC Assistant Superintendent who was previously attending a staff meeting. The FWSO Inspector:<ul style="list-style-type: none"><li>➢ Reviewed overall duties of three desks under the MOC Assistant Superintendent's oversight: power; communications/Automatic Train Control (ATC), and PLNT.</li><li>➢ Governing policies and procedures of the MOC: Superintendent MOC Manual and Organizational Administrative Procedure (OAP) 200-2.</li><li>➢ Reviewed log-on procedures (AIM, Intranet/Outlook, and paper logs) for MOC personnel.</li><li>➢ Discussed the status of MOC personnel manpower and shift coverage requirements.</li><li>➢ Reviewed and discussed the MOC Assistant Superintendent's daily summary log.</li><li>➢ Listened to four service calls, and observed response and notification process.</li></ul></li></ul>		
<b>Remedial Action</b>	N/A		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170713-WMATA-AG-1		
	2017	07	13				
Rail Agency Name	Washington Metropolitan Area Transit Authority (WMATA)			Rail Agency Department	Car Maintenance (CMNT)	Sub-Department	Inspection
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Shady Grove Rail Service and Inspection Facility (A99)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	VM-SI-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	1					
Recommended Finding	Yes					
Remedial Action Required <sup>1</sup>	Yes					
Recommended Reinspection	Yes					

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Shop Observations – Shady Grove Rail Service and Inspection Facility				Activity Code	VM	SI	OBS	
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	No	Out Brief Conducted	Yes	Time	0700-1100	Outside Shift	No	
Related Reports	Safety Directive 16-2 20170712-WMATA-AG-1		Related CAPS / Findings	CAP: TOC-OSP-15-006 Remedial Action ID: 1433							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	N/A	2000/3000 Series Periodic Inspection "B" Inspection Rev. 1.0 09/15/2015		N/A							
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
					X						X
Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)		From		To			
						N/A		N/A			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.14 13:50:13 -05'00'	Date	
Inspector in Charge – Name Adam Giovando	Inspection Team Bill Hultsch, Bob Maniuszko				





Vehicles	Head Car Number	Number of Cars	Equipment	Car Hoist and Body Hoist	
	N/A	3268 - 3269 3260 - 3261			
Description	<p>An FWSO Inspector observed a periodic "B" inspection on rail vehicles 3268 – 3269 and 3260 - 3261. A mechanic performing Task 20, Section 20.7.5 for Collector Shoes – Height and Pressure Check was interviewed. The mechanic was well versed on the procedure, using appropriate instrumentation (e.g., spring-tension gauge and rail-height gauge) to check pressure and height of the current collector shoes and followed the procedure. No exceptions were taken.</p> <p>The team also noted that the team was provided with a safety briefing and a "Contractor Safety Briefing Checklist" was used. This was noted as a good practice. (See Figure 1 below.)</p> <p><b>The following non-color-coded defect was observed:</b></p> <p><b>Operating Instructions for Car Hoist and Body Hoist for 4 and 5 South:</b> The team observed a Master Control Station for a car and body hoist. This was conducted to see if the operating procedures were being followed regarding power being "off" when the lift was in use and not attended. The power was found to be on the Master Control Station that was checked in conflict with its operating instructions.</p> <p><b>A remedial action for this defect was previously issued in FWSO report 20170712-WMATA-AG-1.</b></p> <p>A debriefing was held with the shop supervisor on duty and he was shown the procedure and the condition of the power switch. He noted the condition, turned the power off, and stated he will address it. A follow-up visit is recommended.</p> <p><b>Other Notable Observations:</b></p> <ul style="list-style-type: none"> <li>• Shop compliance with hazardous material storage requirements. The team visited each shop within the facility and the material storage area located below the shop floor (i.e., warehouse in the basement). No deficiencies were found.</li> <li>• Exterior doors to the car wash facility were all labeled and locked. Two of the four doors had the door hardware removed to prevent outside entry. All four doors were secured. No exception was taken.</li> <li>• The forklift operator was wearing appropriate Personal Protective Equipment (PPE), as well as the seat belt, and sounded the forklift horn whenever he encountered low-visibility areas in the warehouse. No deficiencies were noted.</li> </ul>			<b>Number of Defects</b>	1
				<b>Recommended Finding?</b>	Yes
				<b>Remedial Action Required?</b>	Yes
				<b>Recommended Reinspection?</b>	Yes
Remedial Action	N/A				



Photos:

**Contractor Safety Briefing Checklist**

**General**

- Ensure the "fire plan" for the shop and exits are pointed out.
- Follow all OSHA safety rules in or outside the shop pertinent to the tasking.
- Follow all WMATA safety rules in or outside the shop pertinent to the tasking.
- Ensure all equipment utilized is serviceable and is current with any required calibration.
- Ensure all ladders and/or hoists used are serviceable and safe for use.
- Ensure ONLY trained and qualified personnel operate the overhead and JIB cranes
- \_\_\_\_\_

**Rail Vehicle and Running Maintenance Machines**

- No work will be performed on any rail vehicle and/or running maintenance machines without the specific knowledge and concurrence from the on-duty supervisor.
- The first time an ETP and/or EMI is performed on a rail vehicle or running maintenance machine, or when requested, QAAW shall be present and/or been afforded the opportunity to be present prior to any work commencing.
- All work performed will be documented in MAXIMO.
- All rail vehicle radio communications with the tower and/or on-duty supervisor must follow proper radio etiquette and WMATA protocols.
- If work does take place on a rail vehicle and/or running maintenance machines, the on-duty supervisor shall be briefed on rail vehicle or running maintenance machines status prior to contractor departure from shop.
- \_\_\_\_\_

**Shop Fixed Equipment**

- Inform the contractor of the CMNT SOP 3.07 LOTO procedures and adherence there to.
- Rail vehicle and running maintenance machine lifts shall ONLY be used by trained and qualified individuals.
- All equipment shall remain in a safe condition for operation and/or taken out of service by the on-duty Supervisor prior to the contractor's departure from a shop.
- The on-duty supervisor makes the final determination on serviceability of all equipment and/or parts.
- \_\_\_\_\_

July 20, 2015, Rev 2

CMNT Supervisor Printed Name: \_\_\_\_\_

CMNT Supervisor Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Contractor Printed Name: \_\_\_\_\_

Contractor Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Figure 1: Contractor Safety Briefing Form



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170714-WMATA-AG-1		
	2017	07	14				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Stadium-Armory Station (D08)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-RC-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	6				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	No				

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Roadway Worker Protection – Job Safety Briefing				Activity Code	TRK	JSB	OBS	
Job Briefing Employee Name/Title	RWIC, TRST Unit # 6111 Advance Watchman TRST Unit #6145 and 6042 AMF, TRST Unit # 6419		Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	0700-1500	Outside Shift	No	
Related Reports	N/A		Related CAPS / Findings	N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP			Standard		Other / Title		Checklist Reference		
	RWPM										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X		X					X	X		
Line(s)	D-Line	Track Number	track 1		Chain Marker and/or Station(s)	From		To			
						Stadium-Armory Station (D08)		Stadium-Armory Station (D08)			
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								
Description								Number of Defects	0		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.08.15 09:15:47 -05'00'	Date	
Inspector in Charge – Name	Adam Giovando		Inspection Team	Alexander Nepa	



	TRST unit 6111 conducted a job safety briefing at New Carrollton headquarters. The briefing was fully compliant with WMATA Roadway Worker's Protection Manual. No exceptions were taken to the job safety briefing.							<b>Recommended Finding?</b>		No			
								<b>Remedial Action Required?</b>		No			
								<b>Recommended Reinspection?</b>		No			
<b>Remedial Action</b>	N/A												
<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>				AMF Observation			<b>Activity Code</b>		TRK	RC	OBS
<b>Job Briefing Employee Name/Title</b>	RWIC, TRST Unit # 6111 Advance Watchman TRST Unit #6145 & 6042 AMF, TRST Unit #6419				<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	0700 1500	<b>Outside Shift</b>	No	
<b>Related Reports</b>	Safety Directive 15-1				<b>Related CAPS / Findings</b>		CAP R-2-18-A and R-2-19-A						
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard			Other / Title		Checklist Reference			
	TRST-1000 rev. 6		P.O. R-17-03										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>		At-grade	Tunnel	Elevated	N/A	
	X		X								X		
<b>Line(s)</b>	D-Line	<b>Track Number</b>	track 1		<b>Chain Marker and/or Station(s)</b>		From		To				
							Stadium-Armory Station (D08)		Stadium-Armory Station (D08)				
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>		N/A						
	N/A		N/A										
<b>Description</b>	FWSO Inspector performed an observation of the Advanced Mobile Flagger (AMF) and train operator compliance with Permanent Order R-17-03 at Stadium-Armory (D08). No exceptions were taken to the AMF's performance of his duties.							<b>Number of Defects</b>		6			
								<b>Recommended Finding?</b>		Yes			
								<b>Remedial Action Required?</b>		Yes			
	<p>A total of 18 WMATA trains were observed at Stadium-Armory Station. Of the 18 trains, six did not comply with WMATA Permanent Order R-17-03, as described below.</p> <p><b>The FWSO Inspector observed six non-color-coded defects, which were noncompliant with Permanent Order R-17-03:</b></p> <ul style="list-style-type: none"> <li>At 1017 hours, train ID #610, the lead car #6074 operator did not sound the horn when entering the station. Additionally, the operator failed to continually sound the mainline horn and did not appear to maintain half the posted track speed, as required.</li> <li>At 1019 hours, train ID #411, the lead car #5126 operator failed to continually sound the mainline horn when departing the station platform.</li> <li>At 1026 hours, lead car #7004 did not sound the horn when entering the station. Additionally, the operator failed to continually sound the mainline horn and did not appear to maintain half the posted track speed, as required. Moreover, the FWSO Inspector asked for the train ID number and the operator would not provide this information.</li> <li>At 1112 hours, train ID #401, the lead car #7112 operator failed to sound the horn when entering the station platform.</li> <li>At 1116 hours, train ID #904, the lead car #6058 operator failed to sound the horn when entering the station platform.</li> <li>At 1126 hours, train ID #403, the lead car #5040 operator appeared to exceed the required half-posted track speed when departing the station.</li> </ul> <p>Remedial actions for these defects are addressed in WMATA's approach to CAPs R-2-18-A and R-2-19-A.</p>							<b>Recommended Reinspection?</b>		Yes			
<b>Remedial Action</b>	N/A												



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170714-WMATA-AG-2		
	2017	07	14				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	F-Line, tracks 1 and 2, Platform Inspection between Branch Avenue (F11) and Waterfront-SEU (F04)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-WI-PI					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	5					
Recommended Finding	Yes					
Remedial Action Required <sup>1</sup>	Yes					
Recommended Reinspection	Yes					

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Platform Track Inspection				Activity Code	TRK	WI	PI	
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	N/A	Out Brief Conducted	N/A	Time	1000 1400	Outside Shift	No	
Related Reports	N/A		Related CAPS / Findings			N/A					
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	MSRPH										
	TRST 1000										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
			X					X	X		
Line(s)	F-Line	Track Number	tracks 1 and 2	Chain Marker and/or Station(s)		From		To			
						Branch Ave (F11)		Waterfront-SEU (F04)			
Vehicles	Head Car Number		Number of Cars		Equipment		N/A				
	N/A		N/A								
Description								Number of Defects	5		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFWorthTX, ou=DOT FRAFWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.19 14:25:47 -05'00'	Date	
Inspector in Charge - Name	Adam Giovando	Inspection Team	Lee Emard		



	<p>An FWSO team member performed a platform inspection of the track bed, cover boards, Emergency Trip Station (ETS) lights, Train Approach Warning (TAW) lights, drainage and general conditions.</p> <p><b>The following non-color-coded defects were observed:</b></p> <ul style="list-style-type: none"> <li>• <b>TRST 1000 Manual, 13.5.2:</b> Track 1, at Suitland Station (F10), one third rail anchor arm was broken.</li> <li>• <b>TRST 1000 Manual, 10.14.1:</b> Track 2, at Naylor Road Station (F09), an ETS light was out at ETS box F-121.</li> <li>• <b>TRST 1000 Manual, 10.14.1:</b> Track 1, at Naylor Road Station (F09), an ETS light was out at ETS box F-123.</li> <li>• <b>TRST 1000 Manual, 10.14.1:</b> Track 2, at Congress Heights Station (F07), an ETS light was out at ETS box F-88.</li> <li>• <b>TRST 1000 Manual, 10.14.1:</b> Track 1, at Congress Heights Station (F07), an ETS light was out at ETS box F-87.</li> </ul> <p><b>Other Notable Observations:</b></p> <ul style="list-style-type: none"> <li>• Track 1, at Branch Ave Station (F11): One of the approach warning lights on the platform was not working.</li> <li>• Track 2, at Branch Ave Station (F11): Five of the approach warning lights on the platform were not working.</li> <li>• Track 1, at Suitland Station (F10): Twenty-three of the approach warning lights on the platform were not working.</li> <li>• Track 2, at Suitland Station (F10): Ten of the approach warning lights on the platform were not working.</li> <li>• Track 1, at Naylor Road Station (F09): Fifteen of the approach warning lights on the platform were not working.</li> <li>• Track 2, at Naylor Road Station (F09): Eleven of the approach warning lights on the platform were not working.</li> <li>• Track 1, at Southern Ave Station (F08): Forty-eight of the approach warning lights on the platform were not working.</li> <li>• Track 2, at Southern Ave Station (F08): Seven of the approach warning lights on the platform were not working.</li> <li>• Track 1, at Congress Heights Station (F07): One of the approach warning lights on the platform was not working.</li> <li>• Track 2, at Congress Heights Station (F07): One of the approach warning lights on the platform was not working.</li> <li>• Track 1, at Anacostia Station (F06): One of the approach warning lights on the platform was not working.</li> <li>• Track 2, at Anacostia Station (F06): One of the approach warning lights on the platform was not working.</li> <li>• Track 1, at Navy Yard Station (F05): Four of the approach warning lights on the platform were not working.</li> <li>• Track 1, at Waterfront-SEU Station (F04): Twelve of the approach warning lights on the platform were not working.</li> </ul>	<p><b>Recommended Finding?</b></p>	<p>Yes</p>
		<p><b>Remedial Action Required?</b></p>	<p>Yes</p>
		<p><b>Recommended Reinspection?</b></p>	<p>Yes</p>
<p><b>Remedial Action</b></p>	<p>To achieve compliance with WMATA's requirements:</p> <ul style="list-style-type: none"> <li>• WMATA must replace the broken third rail anchor at Suitland Station (F10) on track 1.</li> <li>• WMATA must repair the ETS light at Naylor Road Station (F09) on track 2, box F-121.</li> <li>• WMATA must repair the ETS light at Naylor Road Station (F09) on track 1, box F-123.</li> <li>• WMATA must repair the ETS light at Congress Heights Station (F07) on track 2, box F-88.</li> <li>• WMATA must repair the ETS light at Congress Heights Station (F07) on track 1, box F-87.</li> </ul>		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170716-WMATA-AG-1		
	2017	07	16				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	A- and B-Lines, tracks 1 and 2 between Metro Center Station (A01) and Gallery Place-Chinatown Station (B01)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	3				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

### Activity Summaries

Inspection Activity #	1	Inspection Subject				Roadway Worker Protection – Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	RWIC, TRST Unit 6028 Advance Watch Man TST Unit #6168 AMF, TRST Unit # 6458				Accompanied Inspector?	No	Out Brief Conducted	No	Time	0600 1400	Outside Shift	No	
Related Reports	N/A				Related CAPS / Findings		N/A						
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard			Other / Title		Checklist Reference			
	RWPM												
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A		
	X		X						X				
Line(s)	B-Line	Track Number	tracks 1 and 2	Chain Marker and/or Station(s)	From				To				
					Metro Center (A01)				Gallery Place-Chinatown (B01)				
Vehicles	Head Car Number		Number of Cars		Equipment	N/A							
	N/A		N/A										
Description	The job safety briefing was provided by TRST unit #6028 at Gallery Place-Chinatown Station. The briefing was thorough and fully compliant with WMATA's								Number of Defects		0		
									Recommended Finding?		No		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.19 14:24:01 -05'00'	Date
Inspector in Charge – Name	Adam A. Giovando		Inspection Team	Lee Emard



	Roadway Worker Protection Manual (RWPM) requirements. It included WMATA level-1 ID check, type of protection, Train Approach Warning (TAW), potential hazards, hot spots, hospital locations, and the safety rule of the day.  <b>No exceptions were taken with the job safety briefing.</b>	<b>Remedial Action Required?</b>	No
		<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Track Inspection Observation				<b>Activity Code</b>	TRK	WI	OBS	
<b>Job Briefing Employee Name/Title</b>	RWIC, TRST Unit #6028		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	0600 1400	<b>Outside Shift</b>	No	
<b>Related Reports</b>	N/A		<b>Related CAPS / Findings</b>	N/A							
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	TRST-1000 rev. 6										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X		X						X		
<b>Line(s)</b>	B-Line	<b>Track Number</b>	tracks 1 and 2	<b>Chain Marker and/or Station(s)</b>			From		To		
							Metro Center (A01)		Gallery Place (B01)		
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A					
	N/A		N/A								
<b>Description</b>	FWSO Inspector performed an observation of a WMATA track inspection team on tracks 1 and 2 of the B Line between Metro Center and Gallery Place stations.  <b>The following non-color-coded defects were observed:</b> <ul style="list-style-type: none"> <li>• <b>TRST 1000 Manual, 13.5.2:</b> Broken third rail anchor B1 007+00.</li> <li>• <b>TRST 1000 Manual, 10.17.4.1:</b> Three pieces of relay rail were observed; two between the running rail and one between the catwalk and field side of the rail allowing a trip/fall hazard at B1 007+00.</li> <li>• <b>TRST 1000 Manual, 10.17.4.1:</b> On track 2, one piece of relay rail between the running rail was observed allowing a trip/fall hazard at B2 012+00.</li> </ul>						<b>Number of Defects</b>		3		
							<b>Recommended Finding?</b>		Yes		
							<b>Remedial Action Required?</b>		Yes		
							<b>Recommended Reinspection?</b>		Yes		
<b>Remedial Action</b>	To achieve compliance with WMATA's Requirements: <ul style="list-style-type: none"> <li>• WMATA must replace the third rail anchor assembly at B1 007+00.</li> <li>• WMATA must remove the relay rail at B1 007+00.</li> <li>• WMATA must remove the relay rail at B2 012+00.</li> </ul>										





# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170717-WMATA-AG-1		
	2017	07	17				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	F-Line Track 1 Suitland (F10) to Branch Ave. (F11)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	4				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

### Activity Summaries

Inspection Activity #	1	Inspection Subject				Roadway Worker Protection – Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	RWIC, TRST Unit # 6069 Advance Watchman TRST Unit # 6209 AMF, TRST Unit # 6227			Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000 1500	Outside Shift		No	
Related Reports	N/A			Related CAPS / Findings		N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM												
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A		
	X		X					X	X	X			
Line(s)	F-Line	Track Number	track 1		Chain Marker and/or Station(s)		From		To				
							Suitland Station (F10)		Branch Avenue (F11)				
Vehicles	Head Car Number		Number of Cars			Equipment	N/A						
	N/A		N/A										
Description										Number of Defects		0	

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.19 14:40:08 -05'00'	Date
Inspector in Charge – Name	Adam Giovando		Inspection Team	Alexander Nepa



	FWSO inspector received a job safety briefing from the RWIC at Suitland (F10) prior to entering the roadway. The briefing covered the type of on track protection (Train Approach Warning), the working limits, where to clear, known hazards and hotspots, safety rule of the day, the location of the nearest hospital, and a check of personal protective equipment and roadway worker protection ID.  <b>The FWSO Inspector took no exceptions to the job safety briefing.</b>	<b>Recommended Finding?</b>	No
		<b>Remedial Action Required?</b>	No
		<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

Inspection Activity #	2	Inspection Subject	Track Observation					Activity Code		TRK	WI	OBS
<b>Job Briefing Employee Name/Title</b>	RWIC, TRST Unit # 6111 Advance Watchman TRST Units #6145 and #6042 AMF, TRST Unit #6419		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	0700-1500	<b>Outside Shift</b>	No		
<b>Related Reports</b>	Safety Directive 15-1 20160410-WMATA-TGB-1		<b>Related CAPS / Findings</b>		CAP: R-2-18-A, R-2-19-A Remedial Action: 474, 475, 477, 479, 480, 481, 482							
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard			Other / Title		Checklist Reference			
	TRST-1000 rev. 6	P.O. T-16-07 and R-17-03										
	RWPM											
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A	
	X							X	X	X		
<b>Line(s)</b>	F-Line	<b>Track Number</b>	track 1	<b>Chain Marker and/or Station(s)</b>	From			To				
					Suitland Station (F10)			Branch Avenue (F11)				
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A						
	N/A		N/A									
<b>Description</b>	FWSO inspector observed WMATA employees and contractors performing a track inspection on track 1 of the F-Line between Suitland (F10) and Branch Avenue (F11). In addition, FWSO inspected track conditions in the same area and followed up on previously issued remedial actions.  <b>The following color-coded defects were observed:</b> <ul style="list-style-type: none"> <li><b>TRST 1000 5.11.7:</b> Between CM 456+00 and 457+00 right rail corrugation/spalling condition was observed. <b>Yellow Maintenance Condition.</b></li> <li><b>TRST 1000 7.9.2.5. (f):</b> At CM 456+50, three fasteners in a row showed signs of structural failure. No gauge or track geometry condition was noted. (See figure 1). <b>Yellow Maintenance Condition.</b></li> </ul> <b>The following non-color-coded defects were observed:</b> <ul style="list-style-type: none"> <li><b>Permanent Order T-16-07:</b> At F1 467+00, track one, a train at an undetermined speed passed the work group at more than half the posted track speed. Due to the excessive speed, the head car number could not be obtained. The last car number was 6094. Additionally, the operator failed to continuously sound the main line horn, as required. This incident was reported by the roadway worker in charge (RWIC) to the Rail Operations Control Center (ROCC).</li> <li><b>Permanent Order R-17-03:</b> At F1-519+00, at 1212 hours, lead car number 6178 approached the work group without continuously sounding the mainline horn, as required.</li> </ul> <b>Remedial actions for these defects are addressed in WMATA's approach to R-2-18-A and R-2-19-A</b>  <b>The following remedial actions were verified as complete:</b> <ul style="list-style-type: none"> <li><b>474:</b> At F1 488+20, the light at the Emergency Trip Station (ETS) box has been repaired and is in working order.</li> </ul>							<b>Number of Defects</b>	4			
								<b>Recommended Finding?</b>	Yes			
								<b>Remedial Action Required?</b>	Yes			
								<b>Recommended Reinspection?</b>	Yes			



	<ul style="list-style-type: none"><li>• <b>475:</b> At F1 496+00, the light at the ETS box has been repaired and is in working order.</li><li>• <b>477:</b> At F1 540+20, the light at the ETS box has been repaired and is in working order.</li><li>• <b>479:</b> At ETS Box 159, the latch on the cabinet door has been repaired.</li><li>• <b>480:</b> At F1 512+00, the light at the ETS box has been repaired and is in working order.</li><li>• <b>481:</b> At F1 520+10, the light at the ETS box has been repaired and is in working order.</li><li>• <b>482:</b> At F1 528+00, the light at the ETS box has been repaired and is in working order.</li></ul> <p><b>Other Notable Observations:</b></p> <ul style="list-style-type: none"><li>• Between J1 490+00 and J1 494+00, lateral rail movement was noted of more than one inch. (See figure 2.) It could not be determined if the Pandrol clip marks on the rail were recent, and a direct result of the high ambient temperature. At the areas of concern, there was no evidence of irregular track geometry and did not show a nervous (wavy) rail condition.</li></ul>		
<b>Remedial Action</b>	To achieve compliance with WMATA's requirements: <ul style="list-style-type: none"><li>• WMATA must replace the defective elastic fasteners at F1 456+50.</li><li>• WMATA must replace the spalled/corrugated rail between F1 456+00 and F1 457+00 on the right rail.</li></ul>		

**Photos:**



**Figure 1:** Defective elastic fastener



Figure 2: Pandrol mark on rail indicating lateral movement



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170717-WMATA-WP-1		
	2017	07	17				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	RTRA	Sub-Department	ROCC
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Rail Operations Control Center (ROCC) 3500 Pennsy Drive Landover, MD 20785						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	ROCC-RC-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	1					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

### Activity Summaries

Inspection Activity #	1	Inspection Subject	ROCC Rules Compliance Observation				Activity Code		ROCC	RC	OBS
Job Briefing Employee Name/Title	N/A		Accompanied Inspector?	N/A		Out Brief Conducted	Yes	Time	2000-0030	Outside Shift	Yes
Related Reports	Safety Management Inspection (SMI), Final Report, June 17, 2015		Related CAPS / Findings		Required Actions: R-1-6-a, R-1-6-b, R-1-9-a						
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	MSRPH	Section 1 – General Rules (Radio Usage and Operation): Rules 1.69 – 1.88									
	RWPM	Permanent Orders: No. T-16-10, No. R-17-03, & No. R-17-02									
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
				X							
Line(s)	N/A		Track Number	N/A		Chain Marker and/or Station(s)	From		To		
							N/A		N/A		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		WINSLOW L. POWELL		Date
Inspector in Charge – Name Winslow Powell		Inspection Team Tamara Powell		

Digitally signed by WINSLOW L. POWELL  
DN: c=US, o=U.S. Government, ou=FTAHQ, ou=DOT Headquarters, cn=WINSLOW L. POWELL  
Date: 2017.07.21 12:19:30 -0400



Vehicles	Head Car Number	Number of Cars	Equipment	N/A	
	N/A	N/A			
<b>Description</b>	<p>An FWSO Inspector conducted a Rules Compliance observation at the Rail Operations Control Center (ROCC). The inspector observed radio activities on Operations (Ops) 1 Console (or Red Line), for compliance with the Metrorail Safety Rules and Procedures Handbook (MSRPH), as well as permanent orders and rules that govern roadway access activities and radio procedures. The inspector also observed other ROCC procedures and noted the Rail Traffic Controller's (RTC's) overall performance and response to incidents that took place until after completion of service and during preparation for overnight maintenance activities.</p> <p><b>Radio Procedures and Protocols:</b></p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector observed the RTCs during each radio broadcast. The RTC acknowledged most radio requests and ended each transmission with "over" and "out." There were a few instances where the controller did not properly close the communication loop.</li> <li>○ The RTCs coordinated between the field portable track units, train operators, station managers, as well as each other, to monitor revenue service.</li> <li>○ The RTCs employed International Civil Aviation Organization (ICAO) standards for radio transmissions and phone calls with personnel involving power requests and alphanumeric station identification.</li> <li>○ The RTCs ensured each unit or operator acknowledged each operating instruction, clearance, and transmission with 100 percent word-for-word read back.</li> <li>○ The RTCs made clear and appropriate radio broadcasts that informed personnel of all operational anomalies and established roadway access protection in place that may potentially impact operations, roadway access requests, and inspections.</li> </ul> <p><b>Documentation and Checklists:</b></p> <ul style="list-style-type: none"> <li>○ The FWSO Inspector reviewed all required checklists regarding roadway access and foul time.</li> <li>○ The RTCs maintained a written log of all personnel on the roadway ("<i>Maintenance Access Form</i>") with recorded all call-on/call-off times, the level of protection, and other required information to manage and monitor access and coordination.</li> <li>○ Foul time checklists were properly filled out in accordance with Metro rules and permanent orders; including time and location of access, the establishment of red signal and prohibit exits, human form and blocked track, and trains restricted and/or affected by each request.</li> <li>○ The FWSO Inspector observed two transfer shifts for both controllers at the Ops 1 Console. Relieving RTCs electronically signed onto Advanced Information Management (AIM) System screen at the beginning of their shift, and initialed the paper and electronic logbook ("<i>ROCC Daily Activity Log</i>"), acknowledging defects and anomalies on the line.</li> <li>○ The RTCs also verbally exchanged operating conditions and anomalies upon each transfer of duties.</li> </ul> <p><b>Roadway Access:</b></p> <p>The FWSO Inspector observed the RTC radio performance and other required duties associated with RWP access requests for two work crews on the Ops 1 Console, with two foul time requests made. Both RTCs were compliant with Permanent Order No. R-17-02 (Granting Foul Time) and Permanent Order No. R-17-03 (Advanced Mobile Flagger [AMF]).</p> <ul style="list-style-type: none"> <li>○ The personnel followed proper radio protocol when they called on/off over the radio. This included identification of self and work crew, the location of foul time request (station or chain marker), and the reason for the request.</li> </ul>			<b>Number of Defects</b>	1
				<b>Recommended Finding?</b>	No
				<b>Remedial Action Required?</b>	No
				<b>Recommended Reinspection?</b>	No



	<ul style="list-style-type: none"><li>○ Personnel acknowledged location and presence of AMFs required for each access request.</li><li>○ The RTCs established and broadcasted all red signals and “prohibit exits,” as well as human form and blue block track, via the AIM system as required by each level of protection.</li><li>○ The RTC required 100 percent and word-for-word repeat backs for all requests, ensuring the track units were in receipt of and repeated back full instructions and clearance.</li><li>○ The RTCs properly broadcast all on/off times for all access requests.</li></ul> <p><b>The following non-color-coded defect was observed:</b></p> <ul style="list-style-type: none"><li>● <b>MSRPH Rule 1.79:</b> Field personnel continue to violate radio rules, regarding “over” and “out” requirements.</li></ul> <p><b>Remedial Action for this defect is addressed in WMATA's approach to CAP R-1-6-A</b></p>		
<b>Remedial Action</b>	N/A		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170718-WMATA-AG-1		
	2017	07	18				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Foggy Bottom (C04) and Pentagon City (C08) Interlockings						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	13				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Roadway Worker Protection – Job Safety Briefing				Activity Code	TRK	JSB	OBS	
Job Briefing Employee Name/Title	TRST Unit #6168		Accompanied Inspector?	No	Out Brief Conducted	No	Time	1000 1500	Outside Shift	No	
Related Reports	N/A		Related CAPS / Findings	N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	RWPM										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X							X		X	
Line(s)	C-Line	Track Number	track 1 and 2	Chain Marker and/or Station(s)	From		To				
					Pentagon City (C08)		Foggy Bottom- GWU (C04)				
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								
Description	The job safety briefing was provided by TRST unit #6168 at Pentagon City Station. The briefing was thorough and fully compliant with WMATA's Roadway Worker's						Number of Defects	0			
							Recommended Finding?	No			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>	Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFIWorthTX, ou=DOT FRAFIWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.08.01 15:13:49 -05'00'	Date
Inspector in Charge	Adam Giovando	Inspection Team	Lee Emard, Adam Giovando and Al Nepa





	Protection Manual (RWPM) requirements. It included WMATA level-1 ID check, type of protection, train approach warning (TAW), potential hazards, hot spots, hospital locations, and safety rule of the day.  <b>No exceptions were taken with the job safety briefing</b>	<b>Remedial Action Required?</b>	No
		<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b> Switch Inspection					<b>Activity Code</b>		TRK	WI	PI
<b>Job Briefing Employee Name/Title</b>	RWIC, TRST Unit #6168			<b>Accompanied Inspector</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	1000-1500	<b>Outside Shift</b>	No
<b>Related Reports</b>						<b>Related CAPS / Findings</b>					
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference		
	TRST-1000, rev. 6										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X								X		
<b>Line(s)</b>	C-Line	<b>Track Number</b>	track 1 and 2	<b>Chain Marker and/or Station(s)</b>	From			To			
					Pentagon City (C08)			Foggy Bottom- GWU (C04)			
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A					
	N/A		N/A								
<b>Description</b>	<p>FWSO Inspectors performed a mainline switch inspection of all switches in the interlockings at Pentagon City (C08) and Foggy Bottom (C04) on tracks one and two of the C-Line.</p> <p><b>The following color-coded defects were observed:</b></p> <ul style="list-style-type: none"> <li>• <b>TRST 1000 Manual, 9.22.3:</b> Frog at C08, switch 1B, on track 2 showed excessive tread wear of 7/16 inch requiring operating speed of not more than 15 MPH. <b>Red condition.</b></li> <li>• <b>TRST 1000 Manual, 9.22.3:</b> Frog at C08, switch 3A, on track 1 showed excessive tread wear of 7/16 inch requiring operating speed of not more than 15 mph. <b>Red condition.</b></li> <li>• <b>TRST 1000 Manual, 9.22.3:</b> Frog at C04, switch 1A, on track 1 showed excessive tread wear of 7/16 inch requiring operating speed of not more than 15 mph. <b>Red condition.</b></li> </ul> <p><b>The following non-color-coded defects were observed:</b></p> <ul style="list-style-type: none"> <li>• <b>TRST 1000 Manual, 13.5.7:</b> No cover on end approach on track 2, CM 290+00, switch 3B, at C08.</li> <li>• <b>TRST 1000 Manual, 9.27.3:</b> Frog at C08, switch 1A, track 1, had one missing frog bolt and one loose frog bolt.</li> <li>• <b>TRST 1000 Manual, 10.15:</b> Tunnel light at C08, switch 1A, track 1, was not working.</li> <li>• <b>TRST 1000 Manual, 9.27.3:</b> The FWSO Inspector observed five loose bolts on the frog mounting plate located at C04, switch 3B, on track 2.</li> <li>• <b>TRST 1000 Manual, 9.27.3:</b> At C04, switch 1B, track 2, three bad fasteners in a row; five bad in 104 inches.</li> <li>• <b>TRST 1000 Manual, 9.27.21:</b> Switch rod #4 at C04, switch 1B, track 2, missing cotter pin in bolt and rod was loose.</li> <li>• <b>TRST 1000 Manual, 13.5.7:</b> No cover on end approach on track 1, CM 65+00, switch 3A.</li> <li>• <b>TRST 1000 Manual, 9.27.21:</b> Switch rods #3 and #4 at C04, switch 3A, track 1, were loose.</li> </ul>						<b>Number of Defects</b>		12		
							<b>Recommended Finding?</b>		Yes		
							<b>Remedial Action Required?</b>		Yes		
							<b>Recommended Reinspection?</b>		Yes		



	<ul style="list-style-type: none"> <li>• <b>TRST 1000 Manual, 9.27.3.</b> At C04, switch 1A, track 1, three bad fasteners in a row; five out of six were bad in 120 inches.</li> </ul> <p><b>Other Notable Observations:</b> Entire crossover at Foggy Bottom on track 1 and 2 exhibited arcing from the third rail and running rail. This indicated poor surface conditions. Burns on running rail frogs and third rail are apparent. It is recommended that measurements need to be taken under load to analyze defects.</p>		
<p><b>Remedial Action</b></p>	<p>To achieve compliance with WMATA's requirements:</p> <ul style="list-style-type: none"> <li>• WMATA must repair the tread on the frog point and bring it back within tolerance at C08, switch 1B, at C2 289+00.</li> <li>• WMATA must repair the tread on the frog point and bring it back within tolerance at C08, switch 3A, at C1 289+00.</li> <li>• WMATA must repair the tread on the frog point and bring it back within tolerance at C08, switch 1A, at C1 289+00.</li> <li>• WMATA must repair the tread on the frog point and bring it back within tolerance at C04, switch 1A, at C1 66+00.</li> <li>• WMATA must replace cover board on end approach at C2 290+00, switch 3B, at C08.</li> <li>• WMATA must replace and tighten the frog bolts at C08, switch 1A, at C1 289+00.</li> <li>• WMATA must repair tunnel work light at C08, switch 1A, at C1 289+00.</li> <li>• WMATA must tighten five frog mounting plate bolts at C04, switch 3B, at C2 66+00.</li> <li>• WMATA must repair five fasteners at C04, switch 1B, at C2 66+00.</li> <li>• WMATA must replace cotter pin and tighten bolts on #4 switch rod at C04, switch 1B, at C2 66+00.</li> <li>• WMATA must replace cover board on end approach at C04, switch 3A, at C1 66+00.</li> <li>• WMATA must tighten bolts on #3 and #4 switch rods at C04, switch 3A, at C1 66+00.</li> <li>• WMATA must replace six bad fasteners at C04, switch 1A, at C1 66+00.</li> </ul>		



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170718-WMATA-WP-1		
	2017	07	18				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	POWR	Sub-Department	CM
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Waterfront-SEU (F04), AC Switchboard Room #2						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-JSB-OBS	TP-RM-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	0				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	No				
Recommended Reinspection	No	No				

### Activity Summaries

Inspection Activity #	1	Inspection Subject				Waterfront-SEU (F04) – Safety Briefing			Activity Code		TP	JSB	OBS
Job Briefing Employee Name/Title	WMATA Power Personnel				Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1430-1730	Outside Shift	No	
Related Reports	N/A				Related CAPS / Findings		N/A						
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard			Other / Title		Checklist Reference			
	RWPM												
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A		
			X									X	
Line(s)	F-Line	Track Number	N/A		Chain Marker and/or Station(s)		From		To				
							N/A		N/A				
Vehicles	Head Car Number		Number of Cars		Equipment		N/A						
	N/A		N/A										
Description	FWSO personnel received a job safety briefing from the WMATA power personnel. All personal protective equipment (PPE) and roadway worker protection (RWP) IDs were checked. WMATA power personnel covered the							Number of Defects		0			
								Recommended Finding?		No			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		WINSLOW L. POWELL		Date	
Inspector in Charge – Name Winslow Powell		Inspection Team Tino Sahoo			

Digitally signed by WINSLOW L. POWELL  
DN: cn=US, o=U.S. Government, ou=FTAHQ, ou=DOT Headquarters, cn=WINSLOW L. POWELL  
Date: 2017.07.21 12:14:44 -0400



	nearest hospital and safety rule of the day. The potential safety hazards were discussed.  <b>The FWSO Inspector did not note any defects.</b>		
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<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Waterfront-SEU (F04) – 13.8 kV AC Switchgear Corrective Maintenance (CM)				<b>Activity Code</b>	TP	RM	OBS	
<b>Job Briefing Employee Name/Title</b>	WMATA Power Personnel		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	1430-1730	<b>Outside Shift</b>	No	
<b>Related Reports</b>	N/A		<b>Related CAPS / Findings</b>		N/A						
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	N/A										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
			X								X
<b>Line(s)</b>	F-Line	<b>Track Number</b>	N/A	<b>Chain Marker and/or Station(s)</b>		From		To			
						N/A		N/A			
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	13.8 kV (ABB – Manufacturer) AC Switchgear					
	N/A		N/A								
<b>Description</b>	<p>The FWSO Inspector observed WMATA's power personnel performing corrective maintenance on the alternating current (AC) switchgear located in AC switchboard room #2. Water infiltration into the room through the cable conduits that land vertically on the switchgear caused the primary main breaker and current transformer (CT)/potential transformer (PT) cubicles to fault and fail. WMATA had in storage new spare primary main and CT/PT cubicles. WMATA power personnel—in conjunction with WMATA engineering—developed a three-layer solution to mitigate water intrusion. This consisted of using a gel-based sealing material that would be pumped into the cable conduits, a drip tray above the switchgear, and finally a sealing hardware (ring) around the conduits where they would land on the AC switchgear. No issues were noted with the work performed.</p> <p><b>The FWSO Inspector and WMATA personnel did not note any defects during the replacement process.</b></p>						<b>Number of Defects</b>		0		
							<b>Recommended Finding?</b>		No		
							<b>Remedial Action Required?</b>		No		
							<b>Recommended Reinspection?</b>		No		
<b>Remedial Action</b>	N/A										



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170718-WMATA-WP-2		
	2017	07	18				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRPM	Sub-Department	PM
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Judiciary Square (B02) Tie Breaker (TB)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-JSB-OBS	TP-RM-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	0				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	No				
Recommended Reinspection	No	No				

### Activity Summaries

Inspection Activity #	1	Inspection Subject					Judiciary Square (B02) – Safety Briefing			Activity Code		TP	JSB	OBS
Job Briefing Employee Name/Title	WMATA Power Personnel				Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000-1400	Outside Shift	No		
Related Reports	N/A				Related CAPS / Findings		N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP			Standard			Other / Title		Checklist Reference				
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
			X									X		
Line(s)	B-Line	Track Number	N/A		Chain Marker and/or Station(s)		From			To				
							N/A			N/A				
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	FWSO personnel received a job safety briefing from the WMATA power personnel. All personal protective equipment (PPE) and roadway worker protection (RWP) IDs were checked. WMATA power personnel covered the									Number of Defects		0		
										Recommended Finding?		No		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		WINSLOW L. POWELL			Date	
Inspector in Charge - Name Winslow Powell		Inspection Team Tino Sahoo				

Digitally signed by WINSLOW L. POWELL  
DN: c=US, o=U.S. Government, ou=FTAHQ, ou=DOT Headquarters, cn=WINSLOW L. POWELL  
Date: 2017.07.27 13:09:46 -0400



		nearest hospital and safety rule of the day. The potential safety hazards were discussed.										
		<b>The FWSO Inspector did not note any defects.</b>										
<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>			Judiciary Square (B02) – DC Switchgear Feeder Breakers Preventive Maintenance (PM)			<b>Activity Code</b>		TP	RM	OBS
<b>Job Briefing Employee Name/Title</b>	WMATA Power Personnel			<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	1000-1400	<b>Outside Shift</b>	No	
<b>Related Reports</b>	N/A			<b>Related CAPS / Findings</b>		N/A						
<b>Related Rules, SOPs, Standards, or Other</b>	Ref			Rule or SOP		Standard		Other / Title		Checklist Reference		
	PREVENTIVE MAINTENANCE INSTRUCTIONS (PMI) FOR G.E. 750 V DC MC6 BREAKER ANNUAL INSPECTION (REVISION 2; MARCH 20, 2012)											
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A	
			X									X
<b>Line(s)</b>	B-Line	<b>Track Number</b>		N/A	<b>Chain Marker and/or Station(s)</b>		From		To			
							Tie Breaker (TB)		Tie Breaker (TB)			
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>		750 V DC (General Electric (GE) – Manufacturer) DC Switchgear					
	N/A		N/A									
<b>Description</b>	An FWSO Inspector observed WMATA's power personnel performing preventive maintenance on a lineup of five direct current (DC) feeder breakers on the 750 V DC (GE) switchgear located in the tie breaker house. Maintenance was performed according to the published preventive maintenance instructions (PMI) for G.E. 750 V DC MC6 Breaker Annual Inspection (Revision 2, March 20, 2012). No issues were observed.  <b>The FWSO Inspector and WMATA personnel did not note any defects during the replacement process.</b>						<b>Number of Defects</b>		0			
							<b>Recommended Finding?</b>		No			
							<b>Remedial Action Required?</b>		No			
							<b>Recommended Reinspection?</b>		No			
<b>Remedial Action</b>	N/A											



# Inspection Form

FOIA Exemption: All (b)(6)  
Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170719-WMATA-WP-1		
	2017	07	19				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRPM	Sub- Department	CBL. IN.
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Metro Center (A01) to Dupont Circle (A03) Track 1						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-JSB-OBS	TP-WI-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	12				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	No				
Recommended Reinspection	No	No				

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Metro Center - Job Safety Briefing (Mobile Work Crew)				Activity Code	TP	JSB	OBS	
Job Briefing Employee Name/Title	WMATA RWIC		Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000-1400	Outside Shift	No	
Related Reports	N/A		Related CAPS / Findings	N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP	Standard			Other / Title		Checklist Reference			
	WMATA PERMANENT ORDER R-17-03 (ADVANCED MOBILE FLAGGER), FRIDAY APRIL 28, 2017										
	RWPM										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X								X		
Line(s)	A-Line	Track Number	track 1	Chain Marker and/or Station(s)			From		To		
							N/A		N/A		
Vehicles	Head Car Number	Number of Cars		Equipment		N/A					

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	WINSLOW L. POWELL			Date	
Inspector in Charge - Name	Winslow Powell		Inspection Team	Tino Sahoo	

Digitally signed by WINSLOW L. POWELL  
DN: c=US, o=U.S. Government, ou=FTAHQ, ou=DOT Headquarters, cn=WINSLOW L. POWELL  
Date: 2017.07.27 13:06:14 -04'00'



	N/A	N/A		
<b>Description</b>	<p>FWSO personnel received a job safety briefing from the WMATA roadway worker in charge (RWIC). All personal protective equipment (PPE) and roadway worker protection (RWP) IDs were checked and the working limits were reviewed. The WMATA roadway worker in charge (RWIC) covered the nearest hospital and safety rule of the day. The hot spots, hazards, clearance areas, communication, and Roadway Access Guide were used as part of the discussion.</p> <p>In addition to the required PPE, the Advanced Mobile Flagger (AMF) did have the required equipment, and was compliant with "WMATA PERMANENT ORDER R-17-03 (ADVANCE MOBILE FLAGGER), FRIDAY APRIL 28, 2017." This equipment consisted of WMATA-approved flashing amber lantern/E-flare, orange flag (18'x18') calibrated working radio, air horn, and whistle.</p> <p>The AMF did notify the RWIC via positive communication (phone) that he was in place (next station ahead in the direction the mobile crew walked), and the flashing amber lantern/E-flare and the orange flag had been positioned at the end of the platform (8-car marker or end gate). No exceptions were taken.</p> <p><b>The FWSO Inspector did not note any defects.</b></p>			<b>Number of Defects</b> 0 <b>Recommended Finding?</b> No <b>Remedial Action Required?</b> No <b>Recommended Reinspection?</b> No
<b>Remedial Action</b>	N/A			

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>			Walking Observation (Cable Inspection)			<b>Activity Code</b>		TP	WI	OBS
<b>Job Briefing Employee Name/Title</b>	WMATA RWIC			<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	1000-1400	<b>Outside Shift</b>	No	
<b>Related Reports</b>	N/A			<b>Related CAPS / Findings</b>		N/A						
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP			Standard			Other / Title		Checklist Reference		
	TRACK AND STRUCTURES DIVISION – TRST 1000 TRACK MAINTENANCE AND INSPECTION MANUAL (REVISION 7, MARCH 2017)											
	TRACTION POWER DESIGN DRAWING (DD-TP-SSI-013, REVISION 0, AUGUST 2001)											
	ENGINEERING MODIFICATION INSTRUCTIONS (EMI) FOR JUMPER, EXPANSION, AND TRANSITION POWER CABLES REPLACEMENT SYSTEM WIDE (REVISION 2, SEPTEMBER 16, 2016)											
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A	
	X								X			
<b>Line(s)</b>	A-Line	<b>Track Number</b>		track 1	<b>Chain Marker and/or Station(s)</b>		From		To			
							Metro Center (A01)		Dupont Circle (A03)			
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A						
	N/A		N/A									
<b>Description</b>	<p>FWSO observed WMATA inspectors conducting a cable inspection on track 1 of the A-Line between Metro Center (A01) and Dupont Circle (A03).</p> <p><b>The following new defects were observed, and there were no color-coded conditions noted:</b></p> <ul style="list-style-type: none"> <li>Non-compliance with Traction Power Design Drawing DD-TP-SSI-013:             <ul style="list-style-type: none"> <li>Conduit stub-up was broken and needs new OZ Gedney bushing at A1 015+00. (See Figure 1.)</li> </ul> </li> </ul>							<b>Number of Defects</b> 12 <b>Recommended Finding?</b> Yes <b>Remedial Action Required?</b> Yes <b>Recommended Reinspection?</b> Yes				





	<ul style="list-style-type: none"> <li>- Cable jacket nicked at A1 046+00. (See Figure 3.)</li> <li>- Damaged cable and damaged boot from rubbing against 3<sup>rd</sup> rail cover board at A1 056+00. (See Figures 7 and 8.)</li> <li>- Conduit stub-up was broken and needs new OZ Gedney bushing at A1 057+00. (See Figure 9.)</li> </ul> <ul style="list-style-type: none"> <li>• TRST 1000 Manual, 13.5.2: 3<sup>rd</sup> rail tie anchor broken at A1 019+00. (See Figure 2.)</li> <li>• TRST 1000 Manual, 13.5.7: Cover board loose on 3<sup>rd</sup> rail at A1 024+00.</li> <li>• TRST 1000 Manual, 13.5.7: Missing 3<sup>rd</sup> rail cover board at A1 045+00.</li> <li>• TRST 1000, defect 3.2.2.1: Standing water and caked mud surrounding 3<sup>rd</sup> rail insulators from A1 047+50 to A1 048+00. (See Figure 4.)</li> <li>• TRST 1000, defect 3.2.2.1: Trough/invert drain clogged from A1 047+50 to A1 050+50. (See Figure 5)</li> <li>• TRST 1000 Manual, 13.3.2: Physical 3<sup>rd</sup> rail rusted out at A1 055+50. (See Figure 6.)</li> <li>• TRST 1000 Manual, 3.2.2.4: Water leaking from tunnel ceiling onto 3<sup>rd</sup> rail cover board at A1 055+50. (See Figure 6.)</li> <li>• TRST 1000 Manual, 13.5.7: Missing 3<sup>rd</sup> rail cover board from A1 056+00 to A1 060+00.</li> </ul> <p><b>Other Notable Observations:</b></p> <ul style="list-style-type: none"> <li>• A1 045+00 – Trash and debris surrounding power feeder cable conduit stub-ups.</li> </ul>		
<p><b>Remedial Action</b></p>	<p>To achieve compliance with WMATA’s requirements:</p> <ul style="list-style-type: none"> <li>• WMATA must install new OZ Gedney bushing at A1 015+00.</li> <li>• WMATA must replace nicked cable at A1 046+00.</li> <li>• WMATA must replace damaged cable and damaged boot at A1 056+00.</li> <li>• WMATA must install new OZ Gedney bushing at A1 057+00.</li> <li>• WMATA must replace 3<sup>rd</sup> rail tie anchor at A1 019+00.</li> <li>• WMATA must replace cover board at A1 024+00.</li> <li>• WMATA must replace cover board at A1 045+00.</li> <li>• WMATA must mitigate water intrusion, clear standing water, and clear caked mud from A1 047+50 to A1 048+00.</li> <li>• WMATA must mitigate water intrusion and clean out trough/invert drain between A1 047+50 and A1 050+50.</li> <li>• WMATA must replace a portion of 3<sup>rd</sup> rail that is rusted at A1 055+50.</li> <li>• WMATA must mitigate water intrusion at A1 055+50.</li> <li>• WMATA must replace cover board from A1 056+00 to A1 060+00.</li> </ul>		



Photos:



FIGURE 1 – A1 015+00 - CONDUIT STUB-UP BROKEN AND NEEDS NEW OZ GEDNEY BUSHING.



FIGURE 2 – A1 019+00 - 3<sup>RD</sup> RAIL TIE ANCHOR BROKEN



FIGURE 3 – A1 046+00 - CABLE JACKET NICKED



FIGURE 4 – A1 047+50 TO A1 048+00 - STANDING WATER AND CAKED MUD SURROUNDING 3<sup>RD</sup> RAIL INSULATORS



FIGURE 5 – A1 047+50 TO A1 050+50 - TROUGH/INVERT DRAIN CLOGGED



FIGURE 6 – A1 055+50 - PHYSICAL 3<sup>RD</sup> RAIL RUSTED OUT AND WATER LEAKING FROM CEILING ONTO 3<sup>RD</sup> RAIL COVER BOARD



FIGURE 7 – A1 056+00 - DAMAGED CABLE FROM RUBBING AGAINST 3<sup>RD</sup> RAIL COVER BOARD



FIGURE 8 – A1 056+00 - DAMAGED ORANGE BOOT FROM RUBBING AGAINST 3<sup>RD</sup> RAIL COVER BOARD



FIGURE 9 – A1 057+00 - CONDUIT STUB-UP BROKEN; NEEDS NEW OZ GEDNEY BUSHING





# Inspection Form

FOIA Exemption: All (b)(6)  
Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

## Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170720-WMATA-AG-1		
	2017	07	20				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Rhode Island Ave. Station (B04)						

## Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	0				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	No				
Recommended Reinspection	No	No				

## Activity Summaries

Inspection Activity #	1	Inspection Subject					Roadway Worker Protection – Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	TRST Unit #6112			Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1030-1200	Outside Shift	No			
Related Reports	N/A			Related CAPS / Findings			N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP			Standard			Other / Title		Checklist Reference				
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
			X								X			
Line(s)	B-Line	Track Number	track 2		Chain Marker and/or Station(s)	From			To					
			Rhode Island Avenue Station (B04)			Rhode Island Avenue Station (B04)								
Vehicles	Head Car Number		Number of Cars		Equipment	N/A								
	N/A		N/A											
Description										Number of Defects		0		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFWorthTX, ou=DOT FRAFWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.25 10:53:35 -05'00'	Date
Inspector in Charge – Name Adam Giovando	Inspection Team Alexander Nepa			



	TRST unit 6112 conducted a job safety briefing at the Rhode Island Avenue Station platform. The briefing was fully compliant with WMATA's roadway worker protection (RWP) requirements. No exceptions were taken to the job safety briefing.							<b>Recommended Finding?</b>	No			
								<b>Remedial Action Required?</b>	No			
								<b>Recommended Reinspection?</b>	No			
<b>Remedial Action</b>	N/A											
<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>				Advanced Mobile Flagger (AMF) Observation		<b>Activity Code</b>		TRK	RC	OBS
<b>Job Briefing Employee Name/Title</b>	TRST Unit #6112			<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	1030-1200	<b>Outside Shift</b>	No	
<b>Related Reports</b>	<b>Related CAPS / Findings</b>											
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference			
			P.O. R 17-03									
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A	
			X							X		
<b>Description</b>	B-Line	<b>Track Number</b>	N/A	<b>Chain Marker and/or Station(s)</b>	From			To				
					Rhode Island Avenue Station (B04)			Rhode Island Avenue Station (B04)				
<b>Vehicles</b>	Head Car Number		Number of Cars		<b>Equipment</b>	N/A						
	N/A		N/A									
<b>Description</b>	An FWSO Inspector performed Permanent Order R-17-03 compliance checks at the Rhode Island Avenue Station Platform. A total of five trains were observed. No exceptions were taken with the AMF performance or train operator compliance.							<b>Number of Defects</b>	0			
								<b>Recommended Finding?</b>	No			
								<b>Remedial Action Required?</b>	No			
								<b>Recommended Reinspection?</b>	No			
<b>Remedial Action</b>	N/A											



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170721-WMATA-AG-1		
	2017	07	21				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	INSP
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	A-Line track 2, Twinbrook to Rockville						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	1				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Roadway Worker Protection – Job Safety Briefing				Activity Code	TRK	JSB	OBS	
Job Briefing Employee Name/Title	TRST Unit #6030			Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000-1500	Outside Shift	No
Related Reports	N/A			Related CAPS / Findings	N/A						
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard			Other / Title		Checklist Reference		
	RWPM										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X							X			
Line(s)	A-Line	Track Number	track 1	Chain Marker and/or Station(s)	From			To			
					Twinbrook Station (A13)			Rockville Station (A14)			
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								
Description	FWSO inspector received a job safety briefing from the RWIC at Twinbrook (A13) prior to entering the roadway. The briefing covered the type of on track						Number of Defects		0		
							Recommended Finding?		No		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.25 10:52:57 -05'00'	Date
Inspector in Charge – Name Adam Giovando	Inspection Team Alexander Nepa			



	protection (Train Approach Warning), the working limits, where to clear, known hazards and hotspots, safety rule of the day, location of nearest hospital, and a check of personal protective equipment and roadway worker protection ID.  No exceptions were taken to the briefing	<b>Remedial Action Required?</b>	No
		<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>					Track Inspection		<b>Activity Code</b>		TRK	WI	PI
<b>Job Briefing Employee Name/Title</b>	TRST Unit #6030					<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	1000 1500	<b>Outside Shift</b>	No
<b>Related Reports</b>						<b>Related CAPS / Findings</b>							
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP			Standard		Other / Title		Checklist Reference			
	TRST-1000 rev. 6												
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A		
	X		X					X					
<b>Line(s)</b>	A-Line		<b>Track Number</b>	track 1		<b>Chain Marker and/or Station(s)</b>	From		To				
							Twinbrook Station (A13)		Rockville Station (A14)				
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A							
	N/A		N/A										
<b>Description</b>	<p>FWSO inspectors observed WMATA employees and contractors performing a track inspection on track 1 of the A-Line between Twinbrook (A13) and Shady Grove (A15). In addition, FWSO inspected track conditions in the same area. Due to train traffic, delays, and excessive heat, the inspection was only completed between Twinbrook and Rockville (A14).</p> <p><b>The FWSO Inspector noted the following color-coded defect:</b></p> <ul style="list-style-type: none"> <li><b>TRST 1000 Manual, 7.9.2.1:</b> At A1 701+60, at the frog of the 3A switch, six non-holding lag bolts, (twist spikes) were noted. <b>This is a green color-coded condition.</b></li> </ul>							<b>Number of Defects</b>		1			
								<b>Recommended Finding?</b>		Yes			
								<b>Remedial Action Required?</b>		Yes			
								<b>Recommended Reinspection?</b>		Yes			
<b>Remedial Action</b>	<p>To achieve compliance with WMATA's requirements:</p> <ul style="list-style-type: none"> <li>WMATA must secure lag bolts at A1 701+60</li> </ul>												





# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170721-WMATA-WP-1		
	2017	07	21				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRPM	Sub-Department	CM
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Arlington Cemetery (C06), tracks 1 and 2, and Arlington Cemetery Traction Power Substation (TPSS)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-JSB-OBS	TP-RM-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	0				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	No				
Recommended Reinspection	No	No				

### Activity Summaries

Inspection Activity #	1	Inspection Subject					Job Safety Briefing		Activity Code		TP	JSB	OBS
Job Briefing Employee Name/Title	WMATA RWIC					Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	0100-0500	Outside Shift	Yes
Related Reports	N/A					Related CAPS / Findings		N/A					
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP		Standard			Other / Title		Checklist Reference			
	RWPM												
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A		
	X							X					
Line(s)	C-Line	Track Number	N/A		Chain Marker and/or Station(s)		From		To				
							N/A		N/A				
Vehicles	Head Car Number		Number of Cars		Equipment		N/A						
	N/A		N/A										
Description	FWSO personnel received a job safety briefing from the WMATA roadway worker in charge (RWIC). All personal protective equipment (PPE) and roadway worker protection (RWP) IDs were checked and the working limits were reviewed. The								Number of Defects		0		
									Recommended Finding?		No		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		<b>WINSLOW L. POWELL</b>		Date	
Inspector in Charge - Name Winslow Powell		Inspection Team Tino Sahoo			

Digitally signed by WINSLOW L. POWELL  
DN: c=US, o=U.S. Government, ou=FTAHQ, ou=DOT Headquarters, cn=WINSLOW L. POWELL  
Date: 2017.07.27 13:00:32 -04'00'



		<p>WMATA RWIC covered the nearest hospital and safety rule of the day. The hot spots, hazards, clearance areas, communication, and Roadway Access Guide were used as part of the discussion.</p> <p><b>The FWSO Inspector did not note any defects.</b></p>										
<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>			Cable Replacement Observation			<b>Activity Code</b>		TP	RM	OBS
<b>Job Briefing Employee Name/Title</b>	WMATA RWIC			<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	0100-0500	<b>Outside Shift</b>	Yes	
<b>Related Reports</b>	N/A			<b>Related CAPS / Findings</b>		N/A						
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference			
	ENGINEERING MODIFICATION INSTRUCTIONS (EMI) FOR JUMPER, EXPANSION, AND TRANSITION POWER CABLES REPLACEMENT SYSTEM WIDE (REVISION 2, SEPTEMBER 16, 2016)											
	PREVENTIVE MAINTENANCE INSPECTION (PMI) FOR TRACK FEEDER CABLE - 1000 KCMIL/1500 KCMIL (REVISION 4, JUNE 16, 2015)											
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A	
	X							X				
<b>Line(s)</b>	C-Line	<b>Track Number</b>	tracks 1 and 2	<b>Chain Marker and/or Station(s)</b>	From		To					
					Arlington Cemetery (C06) TPSS		C1 and C2 CM 218+00					
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	Negative return cable (1000 kcmil, 2 kV)						
	N/A		N/A									
<b>Description</b>	<p>FWSO Inspectors observed WMATA's power department and electrical contractors performing the task of pulling two additional negative return cables (one for each track) through the cable tray in the Traction Power Substation (TPSS) and landing them—but not terminating them—on the negative drainage switchboard. Electrical contractors also installed FRE (fiberglass) conduit trackside to protect these cables (which are located in the cable vault between tracks 1 and 2) and originate from the TPSS. These cables will be installed to the impedance bond wayside per each track.</p> <p>During the inspection, the FWSO Inspector observed the contractor installing the negative feeder cable per the Engineering Modification Instruction (EMI) for jumper, expansion, and transition power cables replacement system wide, issued September 16, 2016.</p> <p><b>The FWSO Inspector did not note any defects during the replacement process.</b></p>						<b>Number of Defects</b>		0			
							<b>Recommended Finding?</b>		No			
							<b>Remedial Action Required?</b>		No			
							<b>Recommended Reinspection?</b>		No			
<b>Remedial Action</b>	N/A											



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170722-WMATA-AG-1		
	2017	07	22				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub-Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	F-Line, track 2, Suitland (F10) to Naylor Road (F09)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	4				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

### Activity Summaries

Inspection Activity #	1	Inspection Subject					Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	TRST Unit #6191					Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	0700-1500	Outside Shift	No	
Related Reports	N/A					Related CAPS / Findings			N/A					
Related Rules, SOPs, Standards, or Other	Ref		Rule or SOP			Standard			Other / Title		Checklist Reference			
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
	X							X						
Line(s)	F-Line		Track Number	track 2	Chain Marker and/or Station(s)			From		To				
								Suitland (F10)		Naylor Road (F09)				
Vehicles	Head Car Number		Number of Cars			Equipment			N/A					
	N/A		N/A											
Description										Number of Defects		0		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>			Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.26 11:02:09 -05'00'	Date	
Inspector in Charge - Name	Adam Giovando		Inspection Team	Alexander Nepa		



	FWSO inspector(s) received a job safety briefing from the roadway worker in charge (RWIC) at Suitland (F10) station prior to entering the roadway. The briefing covered the type of on track protection (Train Approach Warning), the working limits, where to clear, known hazards and hotspots, safety rule of the day, the location of the nearest hospital, and a check of personal protective equipment and roadway worker protection ID.  <b>No exceptions were taken to the job safety briefing.</b>						<b>Recommended Finding?</b>	No			
							<b>Remedial Action Required?</b>	No			
							<b>Recommended Reinspection?</b>	No			
<b>Remedial Action</b>	N/A										
<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>				Track Inspection	<b>Activity Code</b>		TRK	WI	PI
<b>Job Briefing Employee Name/Title</b>	TRST Unit #6191			<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	0700 1500	<b>Outside Shift</b>	Yes
<b>Related Reports</b>	N/A			<b>Related CAPS / Findings</b>		N/A					
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference		
	TRST-1000, rev. 6										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X							X		X	
	F-Line	<b>Track Number</b>	track 2		<b>Chain Marker and/or Station(s)</b>		From		To		
							Suitland (F10)		Naylor Road (F09)		
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>		N/A				
	N/A		N/A								
<b>Description</b>	FWSO inspector observed WMATA employees and contractors performing a track inspection on track 2 of the F-Line between Suitland (F10) and Naylor Road (F09). In addition, FWSO inspected track conditions in the same area.  <b>The following color-coded defects were observed:</b> <ul style="list-style-type: none"> <li><b>TRST 1000 Manual; 7.9.2.1, 11.3., 11.3.7:</b> Between F2 401+00 and 398+00, most lag screws (screw spikes) were not holding as designed, and allowing dynamic gauge up to 57-1/2 inches. (See figures 1 and 2) <b>Red condition.</b></li> <li><b>TRST 1000 Manual; 6.8.1:</b> Between F2 399+90 and 400+00, there were five defective non-holding crossties in a row allowing 57-3/8 to 57-1/2-inch dynamic gauge. <b>Red condition.</b></li> <li><b>TRST 1000 Defect 6.8.1,</b> Between F2 397+90 and 398+00 there are nine defective, non-holding crossties in-a-row allowing 57-3/8 to 57-1/2-inch dynamic gauge. <b>Red condition.</b></li> <li><b>TRST 1000 Defect 5.11.7,</b> Between F2 400+60 and 400+70 low rail (left) spalling condition. <b>Yellow condition.</b></li> </ul>						<b>Number of Defects</b>	4			
							<b>Recommended Finding?</b>	Yes			
							<b>Remedial Action Required?</b>	Yes			
<b>Recommended Reinspection?</b>	Yes										
<b>Remedial Action</b>	To achieve compliance with WMATA's requirements: <ul style="list-style-type: none"> <li>WMATA must correct the non-holding lag screw condition between F2 401+00 and 398+00.</li> <li>WMATA must replace the defective crossties between F2 399+90 and 400+00.</li> <li>WMATA must replace the defective crossties between F2 397+90 and 398+00.</li> <li>WMATA must replace the spalled rail between F2 400+60 and 400+70.</li> </ul>										



Photos:



Figure 1: 1/4-inch field side dynamic plate movement at F2 401+00.



Figure 2: Field side plate movement at F2 401+00.



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170723-WMATA-AG-1		
	2017	07	23				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	E-Line, track 1, College Park (E09) to West Hyattsville (E07)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	12				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Roadway Worker Protection – Job Safety Briefing				Activity Code	TRK	JSB	OBS		
Job Briefing Employee Name/Title	TRST Unit #6191			Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000-1500	Outside Shift	No	
Related Reports	N/A			Related CAPS / Findings	N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard			Other / Title		Checklist Reference			
	RWPM											
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A	
	X							X				
Line(s)	E-Line	Track Number	track 1		Chain Marker and/or Station(s)	From			To			
						College Park (E09)			West Hyattsville (E07)			
Vehicles	Head Car Number		Number of Cars		Equipment	N/A						
	N/A		N/A									
Description	FWSO inspector received a job safety briefing from the roadway worker in charge (RWIC) at College Park (E09) prior to entering the roadway. The briefing covered the type of on track protection (Train Approach Warning), the working limits,						Number of Defects			0		
							Recommended Finding?			No		
							Remedial Action Required?			No		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.26 15:22:28 -05'00'	Date	
Inspector in Charge – Name	Adam Giovando		Inspection Team	Alexander Nepa	





	where to clear, known hazards and hotspots, safety rule of the day, the location of the nearest hospital, and a check of personal protective equipment and roadway worker protection ID.	<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	The FWSO Inspector took no exceptions to the job safety briefing. N/A		

Inspection Activity #	2	Inspection Subject	Track Inspection					Activity Code	TRK	WI	PI
<b>Job Briefing Employee Name/Title</b>	TRST Unit #6191		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	1000-1500	<b>Outside Shift</b>	No	
<b>Related Reports</b>	Safety Directive 15-1		<b>Related CAPS / Findings</b>		CAPs: R-2-18-A and R-2-19-A						
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard			Other / Title		Checklist Reference		
	TRST-1000 rev. 6										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X							X	X	X	
<b>Line(s)</b>	E-Line	<b>Track Number</b>	track 1	<b>Chain Marker and/or Station(s)</b>	From			To			
					College Park (E09)			West Hyattsville (E07)			
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A					
	N/A		N/A								
<b>Description</b>	<p>FWSO inspectors observed WMATA employees and contractors performing a track inspection on track 1 of the E-Line between College Park (E09) and West Hyattsville (E07). In addition, FWSO inspected track conditions in the same area.</p> <p><b>The following color-coded defects were observed:</b></p> <ul style="list-style-type: none"> <li>• <b>TRST 1000 Manual 13.3.8:</b> At E1 411+50, the third rail insulator support was not holding. (See attached Figure 1 and 2). <b>Yellow Condition.</b></li> <li>• <b>TRST 1000 Manual, 13.3.8., table 13.6:</b> At E1 411+60, the third rail insulator support was missing. (See attached Figure 3). <b>Yellow Condition.</b></li> </ul> <p><b>The following non-color-coded defects were observed:</b></p> <ul style="list-style-type: none"> <li>• <b>TRST 1000 Manual, 3.1.2.5:</b> At E1 511+00, the chain marker sign was down.</li> <li>• <b>TRST 1000 Manual, 9.1:</b> At E1 529+90, at the E09 signal, 1A switch, third switch rod was loose.</li> <li>• <b>TRST 1000 Manual, 13.3.14:</b> At E1 414+00, at the E08 signal, the end cover board was missing.</li> <li>• <b>TRST 1000 Manual, 9.1:</b> At E1 414+15, at the E08 signal, 1A switch, number three and four switch rods were loose.</li> <li>• <b>TRST 1000 Manual, 9.22:</b> At E1 414+15, at the E08 signal, 1A switch in the frog, an adjustable brace wedge was missing.</li> <li>• <b>TRST 1000 Manual, 13.3.13:</b> At E1 406+60, the third rail support cable anchor arm was disconnected. (See attached Figure 4).</li> <li>• <b>TRST 1000 Manual, 3.1.2.2:</b> At E1 393+75, poor drainage allowed mud and silt to build in the gauge of the track.</li> <li>• <b>TRST 1000 Manual, 10.15:</b> At E1 386+30, the tunnel light is not working and the lens is laying in the gauge of the track.</li> <li>• <b>TST 1000 Manual, 13.3.14:</b> At E1 382+80, the end approach cover board is missing.</li> <li>• <b>Permanent Order R-16-07:</b> At approximately 1315 hours, on track one, at CM 402+00, a train with end car number 6036 appeared to approach and pass the advanced watchman at a speed exceeding half the posted track speed and more than the required 10 mph. <b>Remedial Action for this defect is addressed in WMATA's approach to CAP R-2-18-A and R-2-19-A.</b></li> </ul>						<b>Number of Defects</b>	12			
							<b>Recommended Finding?</b>	Yes			
							<b>Remedial Action Required?</b>	Yes			
							<b>Recommended Reinspection?</b>	Yes			



<b>Remedial Action</b>	<p>To achieve compliance with WMATA's requirements:</p> <ul style="list-style-type: none"><li>• WMATA must replace the missing and broken third rail insulator supports at chain markers E1 411+50 and E1 411+60.</li><li>• WMATA must correct replace the downed chain marker at E1 511+00.</li><li>• WMATA must tighten the switch rods at the E09 1A switch, chain marker E1 529+90.</li><li>• WMATA must replace the missing end cover boards at chain marker E1 414+00.</li><li>• WMATA must tighten the switch rods at the E08 1A switch, chain marker E1 414+15.</li><li>• WMATA must replace the adjustable brace wedge at the E08 1A switch, chain marker E1 414+15.</li><li>• WMATA must repair the third rail support cable at E1 406+60.</li><li>• WMATA must repair the mud and drainage issues at E1 393+75.</li><li>• WMATA must repair and replace the tunnel light at E1 386+30.</li><li>• WMATA must replace the missing end cover boards at chain marker E1 382+80.</li></ul>
------------------------	--

**Photos:**



**Figure 1:** Non-holding third rail insulator support at E1 411+50.



**Figure 2:** Defective non-supporting cross-tie allowing third rail insulator to collapse at E1 411+50.





Figure 3: Newly installed 10-foot cross-tie without a third rail insulator support attached at E1 411+60.



Figure 4: Disconnected third rail cable support at E1 406+60.



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170725-WMATA-AG-1		
	2017	07	25				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Rosslyn C-K Turnouts tracks 1 and 2						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	6				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Job Safety Briefing				Activity Code	TRK	JSB	OBS	
Job Briefing Employee Name/Title	TRST Unit #6168		Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1100 0700	Outside Shift	Yes	
Related Reports	N/A		Related CAPS / Findings	N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	RWPM										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X		X								
Line(s)	C and K-Lines	Track Number	tracks 1 and 2	Chain Marker and/or Station(s)		From		To			
						Rosslyn (C05)		Rosslyn (C05)			
Vehicles	Head Car Number		Number of Cars		Equipment		N/A				
	N/A		N/A								
Description								Number of Defects	0		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFIWorthTX, ou=DOT FRAFIWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.26 15:28:57 -05'00'	Date
Inspector in Charge - Name	Adam Giovando			
Inspection Team	Adam Giovando & Alexander Nepa			



	FWSO Inspectors received a job safety briefing from the roadway worker in charge (RWIC) at Rosslyn (C05) station prior to entering the roadway. The briefing covered the type of on track protection, the working limits, where to clear, known hazards and hotspots, safety rule of the day, the location of the nearest hospital, and a check of personal protective equipment (PPE) and roadway worker protection (RWP) ID.  <b>No exceptions were taken to the job safety briefing.</b>							<b>Recommended Finding?</b>	No		
								<b>Remedial Action Required?</b>	No		
								<b>Recommended Reinspection?</b>	No		
<b>Remedial Action</b>	N/A										
<b>Inspection Activity #</b>	2	<b>Inspection Subject</b> Track Inspection					<b>Activity Code</b>		TRK	WI	PI
<b>Job Briefing Employee Name/Title</b>	TRST Unit #6168			<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	1100 0700	<b>Outside Shift</b>	Yes
<b>Related Reports</b>	N/A			<b>Related CAPS / Findings</b>		N/A					
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference		
	TRST-1000, rev. 6										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X								X		
	C and K-Lines		<b>Track Number</b>	tracks 1 and 2	<b>Chain Marker and/or Station(s)</b>		From		To		
							Rosslyn (C05)		Rosslyn (C05)		
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>		N/A				
	N/A		N/A								
<b>Description</b>	<p>FWSO Inspectors performed a switch inspection of the C- and K-Line switches on tracks 1 and 2 at Rosslyn Station.</p> <p><b>The following non-color-coded defects were observed:</b></p> <ul style="list-style-type: none"> <li>• <b>TRST 1000 Manual; 7.9.2.1:</b> At C1 147+00, switch one, turnout side, two bolts on frog support plate missing.</li> <li>• <b>TRST 1000 Manual; 7.9.2:</b> At C1 147+00, frog at switch one, main side of frog, two Pandrol clips were missing in a row on the rail joint.</li> <li>• <b>TRST 1000 Manual; 7.9.2:</b> At C1 147+00, switch one on the turn-out side, right rail, three defective fasteners were observed in a row with 77 inches between holding fasteners.</li> <li>• <b>TRST 1000 Manual; 6.14.1:</b> At C1 147+00, the heel of the frog at switch one, defective grout pad not properly holding the fastening system.</li> <li>• <b>TRST 1000 Manual; 13.5.7:</b> At C1 147+00 on the turn-out side, third rail adjacent to the catwalk, five continuous pieces of cover board were missing.</li> <li>• <b>TRST 1000 Manual; 7.9.2:</b> At C2 146+80, at switch three, left rail, four Pandrol clips were missing in-a-row with 77 inches between holding fasteners.</li> </ul> <p><b>Other Notable Observations:</b></p> <ul style="list-style-type: none"> <li>• At C2 146+80, at switch three, a deteriorating grout pad condition exists.</li> </ul>							<b>Number of Defects</b>	6		
								<b>Recommended Finding?</b>	Yes		
								<b>Remedial Action Required?</b>	Yes		
								<b>Recommended Reinspection?</b>	Yes		
<b>Remedial Action</b>	<p>To achieve compliance with WMATA's requirements:</p> <ul style="list-style-type: none"> <li>• WMATA must correct the broken frog support plate bolts on switch one, C1 147+00.</li> <li>• WMATA must replace the missing Pandrol clips at the turnout side of switch one, C1 147+00.</li> <li>• WMATA must replace the defective fasteners at the turnout side of switch one, right rail, C1 147+00.</li> <li>• WMATA must repair the grout pad, under the heel of the frog at C1 147+00.</li> <li>• WMATA must replace the missing cover board pieces at C1 147+00.</li> <li>• WMATA must replace the missing Pandrol clips on the right rail at switch three, C2 148+80.</li> </ul>										



# Inspection Form

FOIA Exemption: All (b)(6)  
Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170725-WMATA-WP-1		
	2017	07	25				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRPM	Sub-Department	PM
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Rhode Island Ave. (B04) Traction Power Substation (TPSS)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TP-JSB-OBS	TP-RM-OBS				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	0				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	No				
Recommended Reinspection	No	No				

### Activity Summaries

Inspection Activity #	1	Inspection Subject					Rhode Island Ave. (B04) – Safety Briefing			Activity Code		TP	JSB	OBS
Job Briefing Employee Name/Title	WMATA Power Personnel				Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000-1400	Outside Shift	No		
Related Reports	N/A				Related CAPS / Findings		N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP			Standard			Other / Title		Checklist Reference				
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A			
			X									X		
Line(s)	B-Line	Track Number	N/A		Chain Marker and/or Station(s)		From			To				
							N/A			N/A				
Vehicles	Head Car Number		Number of Cars			Equipment	N/A							
	N/A		N/A											
Description	FWSO personnel received a job safety briefing from the WMATA power personnel. All personal protective equipment (PPE) and roadway worker protection (RWP) IDs were checked. WMATA power personnel covered the							Number of Defects		0				
								Recommended Finding?		No				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature		WINSLOW L. POWELL		Date
Inspector in Charge – Name Winslow Powell		Inspection Team Tino Sahoo		

Digitally signed by WINSLOW L. POWELL  
DN: c=US, o=U.S. Government, ou=FTAHQ, ou=DOT Headquarters, cn=WINSLOW L. POWELL  
Date: 2017.07.27 12:56:33 -0400



		nearest hospital and safety rule of the day. The potential safety hazards were discussed									
		<b>The FWSO Inspector did not note any defects.</b>									
<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Rhode Island Ave. (B04) – Direct Current (DC) Switchgear Feeder Breakers Preventive Maintenance (PM)				<b>Activity Code</b>		TP	RM	OBS
<b>Job Briefing Employee Name/Title</b>	WMATA Power Personnel		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	1000-1400	<b>Outside Shift</b>	No	
<b>Related Reports</b>		<b>Related CAPS / Findings</b>									
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference		
	PREVENTIVE MAINTENANCE INSTRUCTIONS (PMI) FOR WHIPP and BOURNE 750 VOLT DC TYPE MM74 ANNUAL INSPECTION (REVISION 3, JUNE 20, 2013)										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
			X								
<b>Line(s)</b>	B-Line	<b>Track Number</b>	N/A	<b>Chain Marker and/or Station(s)</b>	From			To			
					Traction Power Substation (TPSS)			Traction Power Substation (TPSS)			
<b>Vehicles</b>	Head Car Number		Number of Cars		<b>Equipment</b>	750 V DC (Whipp and Bourne – Manufacturer) DC Switchgear					
	N/A		N/A								
<b>Description</b>	An FWSO Inspector observed WMATA's power personnel performing preventive maintenance on a lineup of five direct current (DC) feeder breakers on the 750 V DC Whipp and Bourne switchgear located in the Traction Power Substation. Maintenance was performed according to the published PREVENTIVE MAINTENANCE INSTRUCTIONS (PMI) FOR WHIPP and BOURNE 750 VOLT DC TYPE MM74 ANNUAL INSPECTION (REVISION 3, JUNE 20, 2013) and no issues were observed.  <b>The FWSO Inspector and WMATA personnel did not note any defects during the replacement process.</b>						<b>Number of Defects</b>		0		
							<b>Recommended Finding?</b>		No		
							<b>Remedial Action Required?</b>		No		
							<b>Recommended Reinspection?</b>		No		
<b>Remedial Action</b>	N/A										



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170726-WMATA-AG-1		
	2017	07	26				
Rail Agency Name	Washington Metropolitan Area Transit Authority (WMATA)			Rail Agency Department	Car Maintenance (CMNT)	Sub-Department	Inspection
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	New Carrollton Rail Service and Inspection Facility (D99)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	VM-SI-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Shop Observations – New Carrollton Rail Service and Inspection Facility (D99)				Activity Code	VM	SI	OBS	
Job Briefing Employee Name/Title	N/A	Accompanied Inspector?	No	Out Brief Conducted	Yes	Time	0700-1100	Outside Shift	No		
Related Reports	N/A	Related CAPS / Findings	Remedial Action ID: N/A								
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP	Standard		Other / Title		Checklist Reference				
	N/A	5000 Series Periodic Inspection "B" Inspection Rev. 1.0 09/15/2015	N/A								
	N/A	5000 Series Periodic Inspection "A" Inspection Rev. 1.0 09/15/2015	N/A								
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
					X						X
Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)			From	To			
							N/A	N/A			
Vehicles	Head Car Number		Number of Cars		Equipment		N/A				

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.28 12:20:05 -05'00'	Date
Inspector in Charge – Name Adam Giovando	Inspection Team Bill Hultsch			



	N/A	5118 - 5119 5136 - 5137			
<b>Description</b>	<p>Inspector observed periodic "B" inspection on rail vehicles 5118 – 5119. A periodic "A1" inspection was also observed on rail vehicles 5136 – 5137. Documentation used for these periodic maintenance activities was reviewed and deemed current (i.e., Rev. 1.0, 09/15/15).</p> <p>The following observations were conducted:</p> <ol style="list-style-type: none"> <li>1. Task 40: Interior inspection, Section 40.13.3, Passenger Seats</li> <li>2. Task 90: Doors Test Procedure, Section 7.3.2, Push Back Force</li> <li>3. Task 60: Lubrication, Section 60.1.3.7, Collector Shoe Off Rail; Shoe Height Check</li> <li>4. Task 60: Lubrication, Section 60.1.3.8, Collector Shoe Pressure Check</li> </ol> <p>Maintenance procedures were followed and CMNT personnel performing the periodic inspections wore all appropriate Personal Protective Equipment (PPE).</p> <p><b>The FWSO Inspector observed no defects.</b></p> <p><b>Other Notable Observations:</b> WMATA engineering is currently updating their periodic maintenance manuals for the 2K, 3K, 5K, and 6K with assistance from a consulting firm. WMATA has reported that the 7K manual update has been completed.</p>			<b>Number of Defects</b>	0
				<b>Recommended Finding?</b>	No
				<b>Remedial Action Required?</b>	No
				<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A				





# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170727-WMATA-AG-1		
	2017	07	27				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	D- and G-Lines, track 1, Benning Road (G01) to Potomac Ave. (D07)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	7				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Job Safety Briefing				Activity Code	TRK	JSB	OBS	
Job Briefing Employee Name/Title	TRST 6216		Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	1000-1300	Outside Shift	No	
Related Reports	N/A		Related CAPS / Findings	N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	RWPM										
	MSRPH										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X								X		
Line(s)	D- and G-Lines	Track Number	1	Chain Marker and/or Station(s)	From			To			
					Benning Road (G01)			Potomac Ave. (D07)			
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								
Description	FWSO Inspectors received a job safety briefing from the roadway worker in charge (RWIC) at Benning Road (G01) prior to entering the roadway. The briefing covered the type of on-track protection (i.e., Train Approach Warning (TAW)), working limits, where to clear, known hazards and hotspots, the safety rule of the						Number of Defects	0			
							Recommended Finding?	No			
							Remedial Action Required?	No			
							Recommended Reinspection?	No			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.07.28 12:24:26 -05'00'	Date	
Inspector in Charge - Name	Adam Giovando				
Inspection Team	Adam Giovando, Al Nepa, Mike Vitale				





	day, location of the nearest hospital, a check of personal protective equipment (PPE), and roadway worker protection (RWP) ID.		
	<b>No exceptions were taken during the briefing.</b>		
<b>Remedial Action</b>	N/A		

Inspection Activity #	2	Inspection Subject	Remedial Action Follow-Up Inspection				Activity Code		TRK	WI	PI
<b>Job Briefing Employee Name/Title</b>	TRST 6216		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	1000-1300	<b>Outside Shift</b>	No	
<b>Related Reports</b>	20160407-WMATA-TW-2 20160624-WMATA-WA-1 20160626-WMATA-RPM-1 20170126-WMATA-AD-3 Safety Directive 15-1		<b>Related CAPS / Findings</b>		Remedial Actions: 140, 783, 793, 795, 1088 CAPs: R-2-18-A, R-2-19-A						
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	TRST 1000	T-16-07									
	MSRPH										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X								X		
<b>Line(s)</b>	D- and G-Lines	<b>Track Number</b>	track 1		<b>Chain Marker and/or Station(s)</b>	From		To			
						Benning Road (G01)		Potomac Ave. (D07)			
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A					
	N/A		N/A								
<b>Description</b>	FWSO Inspectors performed a track inspection on track one of the D- and G-Lines between Benning Road (G01) and Potomac Ave. (D07) to inspect track conditions and follow up on previously-issued remedial actions.						<b>Number of Defects</b>		7		
							<b>Recommended Finding?</b>		Yes		
							<b>Remedial Action Required?</b>		Yes		
	<p><b>The following non-color-coded defects were observed:</b></p> <ul style="list-style-type: none"> <li><b>TRST 1000 Manual, 7.9.2.5:</b> At G1 338+00, three fasteners in a row on the right rail had a 7/8-inch gap between the fastener and grout pad. This location is at the transition between the floating slab and standard tunnel configurations. The floating slab is lower than the standard construction segment. Upon inspection, the FWSO Inspector noted that two "pucks" designed to support the floating slab were in the drain underneath the slab and not supporting as designed. (See Figures 1 and 2 below.)</li> <li><b>TRST 1000 Manual, 7.9.2.5:</b> At G1 306+50, five defective fasteners in a row spanning 117 inches. As geometry was being maintained, this was classified as a maintenance defect per sections 7.9.2.3 and 7.9.2.4 of the TRST 1000 manual.</li> <li><b>TRST 1000 Manual, 13.3.9:</b> At G1 295+30, a broken 3<sup>rd</sup> rail insulator was observed. (See Figure 3 below.)</li> <li><b>TRST 1000 Manual, 10.17.4.1:</b> Between D1 206+00 and 191+00, the relay rail was in the roadway creating a tripping hazard.</li> <li><b>TRST 1000 Manual, 13.3.9:</b> At D1 118+00, A broken 3<sup>rd</sup> rail insulator was observed.</li> <li><b>Permanent Order T-16-07:</b> At 1041 hours, while at G1 338+00, a train did not appear to maintain 10 mph while passing the work group. <b>Remedial Action for this defect is addressed in WMATA's approach to R-2-18-A and R-2-19-A.</b></li> <li><b>Permanent Order T-16-07:</b> At 1323 hours, while at D1 182+00, a train did not appear to maintain 10 mph while passing the work group. <b>Remedial Action for this defect is addressed in WMATA's approach to R-2-18-A and R-2-19-A.</b></li> </ul> <p><b>The following remedial actions were verified as complete:</b></p>						<b>Recommended Reinspection?</b>		Yes		



	<ul style="list-style-type: none"> <li>• <b>Remedial Action #140:</b> Water leak at D1 182+00 has been mitigated.</li> <li>• <b>Remedial Action #783:</b> Ballast did not show signs of contamination between the D and G junctions and the portal.</li> <li>• <b>Remedial Action #793:</b> Rail has been removed from the roadway between D1 221+00 and 206+00. The remaining segment is addressed in the defect section above.</li> <li>• <b>Remedial Action #795:</b> The FWSO Inspectors observed stud bolts holding as required between D1 206+00 and 202+00. In review of WITK 701.2, these bolts meet the required depth. The remedial action will be closed, but this area will continued to be monitored.</li> <li>• <b>Remedial Action #1088:</b> The water leak at D1 227+90 has been mitigated.</li> </ul>		
<p><b>Remedial Action</b></p>	<p>To achieve compliance with WMATA’s requirements:</p> <ul style="list-style-type: none"> <li>• WMATA must mitigate gap under fasteners at G1 338+00.</li> <li>• WMATA must replace defective fasteners at G1 306+50.</li> <li>• WMATA must replace broken 3<sup>rd</sup> rail insulator at G1 295+30.</li> <li>• WMATA must remove relay rail creating a trip hazard between D1 206+00 and 191+00.</li> <li>• WMATA must replace broken 3<sup>rd</sup> rail insulator at D1 118+00.</li> </ul>		

Photos:



Figure 1: Defective Fasteners at G1 338+00.



Figure 2: Drain obstructed by floating slab "puck" at G1 338+00.



Figure 3: Broken insulator at G1 295+30.



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170727-WMATA-AG-2		
	2017	07	27				
Rail Agency Name	Washington Metropolitan Area Transit Authority (WMATA)			Rail Agency Department	Car Maintenance (CMNT)	Sub-Department	Inspection
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	New Carrollton Rail Service and Inspection Facility (D99)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	VM-SI-OBS					
Inspection Units	1					
Inspection Subunits	1					
Defects (Number)	0					
Recommended Finding	No					
Remedial Action Required <sup>1</sup>	No					
Recommended Reinspection	No					

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Shop Observations – New Carrollton Rail Service and Inspection Facility (D99)				Activity Code	VM	SI	OBS	
Job Briefing Employee Name/Title	N/A	Accompanied Inspector?	No	Out Brief Conducted	Yes	Time	0630-1000	Outside Shift	No		
Related Reports	N/A	Related CAPS / Findings	Remedial Action ID: N/A								
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP	Standard		Other / Title		Checklist Reference				
	N/A	5000 Series Periodic Inspection "C" Inspection Rev. 1.0 09/15/2015	N/A								
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
					X						
Line(s)	N/A	Track Number	N/A	Chain Marker and/or Station(s)		From		To			
						N/A		N/A			
Vehicles	Head Car Number		Number of Cars		Equipment		N/A				
	N/A		5172 - 5173								
Description	Inspector observed periodic "C" inspection on rail vehicles #s 5172 - 5173.						Number of Defects	0			

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>		Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.08.01 14:57:45 -05'00'	Date
Inspector in Charge – Name Adam Giovando	Inspection Team Bill Hultsch			



	<p>Documentation used for these periodic maintenance activities was reviewed and deemed current (i.e., Rev. 1.0, 09/15/15). Note: Maintenance Procedures are currently being revised and are in draft for review.</p> <p>The following observations were conducted:</p> <ol style="list-style-type: none"> <li><b>Task 30, Undercar Electrical, Section 35.4: Traction Inverter Unit.</b> Unit removed from railcar cleaned, inspected, and reinstalled. (See Exhibits 1 and 2 below.)</li> <li><b>Task 30, Undercar Electrical, Section 30.3: Knife Switch Box.</b> Knife switch box properly cleaned, inspected, and continuity measurements taken with volt ohm meter (VOM).</li> <li><b>Task 20, Trucks/Couplers, Section 20.6.3: Brake Disc Inspection.</b> Disc thickness measurements taken with caliper and measurements properly written on discs.</li> <li><b>Task 20, Trucks/Couplers, Section 20.2: Truck Mounted Equipment – General Inspection Guidelines.</b> Disassembly of main traction power cleats/clamps to clean and inspect for cable insulation abrasion under the cleats/clamps.</li> </ol> <p>Maintenance procedures were followed and car maintenance (CMNT) personnel performing the periodic inspections wore all appropriate personal protective equipment (PPE).</p> <p><b>The FWSO Inspector observed no defects.</b></p>	<b>Recommended Finding?</b>	No
		<b>Remedial Action Required?</b>	No
		<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

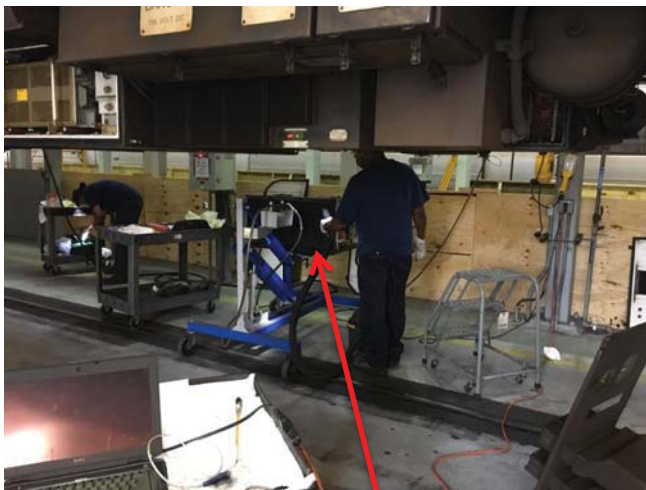


Exhibit 1: Traction Inverter Unit removed from rail car being cleaned and inspected.



Exhibit 2: Traction Power Unit reinstalled.



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170730-WMATA-AG-1		
	2017	07	30				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub- Department	TKIN
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	Medical Center interlocking						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	0				
Recommended Finding	No	No				
Remedial Action Required <sup>1</sup>	No	No				
Recommended Reinspection	No	No				

### Activity Summaries

Inspection Activity #	1	Inspection Subject					Job Safety Briefing			Activity Code		TRK	JSB	OBS
Job Briefing Employee Name/Title	TRST Unit #6014 SAFE Unit #207 RWIC Gang Leader Unit #5093					Accompanied Inspector?	Yes	Out Brief Conducted	No	Time	0830-1100	Outside Shift	Yes	
Related Reports	N/A					Related CAPS / Findings		N/A						
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP				Standard			Other / Title		Checklist Reference			
	RWPM													
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type			At-grade	Tunnel	Elevated	N/A	
	X										X			
Line(s)	A Line		Track Number	tracks 1 and 2		Chain Marker and/or Station(s)			From		To			
									Medical Center (A10)		Bethesda (A09)			
Vehicles	Head Car Number			Number of Cars			Equipment			N/A				
	N/A			N/A										

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>			Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.08.01 14:56:57 -05'00'	Date
Inspector in Charge - Name	Adam Giovando			Inspection Team	Alexander Nepa





<b>Description</b>	FWSO Inspectors received a job safety briefing from the safety briefer at the Bethesda Station briefing table (A09) prior to entering the roadway. The briefing covered the type of on-track protection, working limits, where to clear, known hazards and hotspots, safety rule of the day, location of the nearest hospital, and a check of personal protective equipment (PPE) and roadway worker protection (RWP) ID.  <b>No exceptions were taken to the job safety briefing.</b>	<b>Number of Defects</b>	0
		<b>Recommended Finding?</b>	No
		<b>Remedial Action Required?</b>	No
		<b>Recommended Reinspection?</b>	No
<b>Remedial Action</b>	N/A		

<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Track Inspection				<b>Activity Code</b>	TRK	WI	PI	
<b>Job Briefing Employee Name/Title</b>	SAFE Unit 207 RWIC Gang Leader Unit #5093		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	No	<b>Time</b>	0830-1100	<b>Outside Shift</b>	Yes	
<b>Related Reports</b>	N/A		<b>Related CAPS / Findings</b>	N/A							
<b>Related Rules, SOPs, Standards, or Other</b>	Ref	Rule or SOP	Standard	Other / Title			Checklist Reference				
	TRST-1000, rev. 6										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X								X		
<b>Vehicles</b>	A Line	<b>Track Number</b>	tracks 1 and 2	<b>Chain Marker and/or Station(s)</b>	From			To			
					Medical Center (A10)			Bethesda (A09)			
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A					
	N/A		N/A								
<b>Description</b>	An FWSO Inspector observed WMATA contractors performing tunnel water leak mitigation between Bethesda (A09) and Medical Center (A10), specifically at Medical Center interlocking.  A contractor first identified where water was entering and then a 3/4-inch hole was bored through the tunnel liner into the bedrock where the water originated.  A cylinder-type nozzle with a valve attachment was then placed into the hole prepping it for the injection process. Some of the holes were plugged with a piece of wood, while others were kept open allowing water to drain.  A second crew followed, injecting a rubber/water-based solution into the bored holes penetrating the path of the water up to the bedrock and sealing. In large areas with greater height and multiple leaks, boring holes began at the bottom (or the lowest point of the tunnel) where water is penetrating. Other holes were drilled vertically; approximately between 6-10 feet apart. This action forced the injection material and water to the next highest location, until ultimately forcing it to the originating source. After the solution had been allowed to dry, the injection cylinder was removed. The remaining hole was filled, and the cement was finished flush with the tunnel liner.  (See attached photos illustrating the remediation process.)  <b>The FWSO Inspector noted no defects.</b>						<b>Number of Defects</b>	0			
							<b>Recommended Finding?</b>	No			
							<b>Remedial Action Required?</b>	No			
							<b>Recommended Reinspection?</b>	No			
<b>Remedial Action</b>	N/A										

Photos:



Figure 1: Crews on mobile scaffolding drilling 3/4-inch holes through the tunnel liner into the bedrock above the lining at the source of the water.



Figure 2: After holes are bored, water was released from the entering source.





Figure 3: Water draining from another bored hole.



Figure 4: Pooling water from a bored hole accumulating on tunnel floor at the base of the rail.



Figure 5: Cylinder/valve injection device placed into the hole prepared for solution injection.



Figure 6: Crews in hi-rail bucket truck preparing to inject the solution into holes.





**Figure 7:** Hole after the solution is applied. After ample time to dry, the injection cylinder is removed, and the remaining hole filled. The cement finished is flush with the tunnel liner.

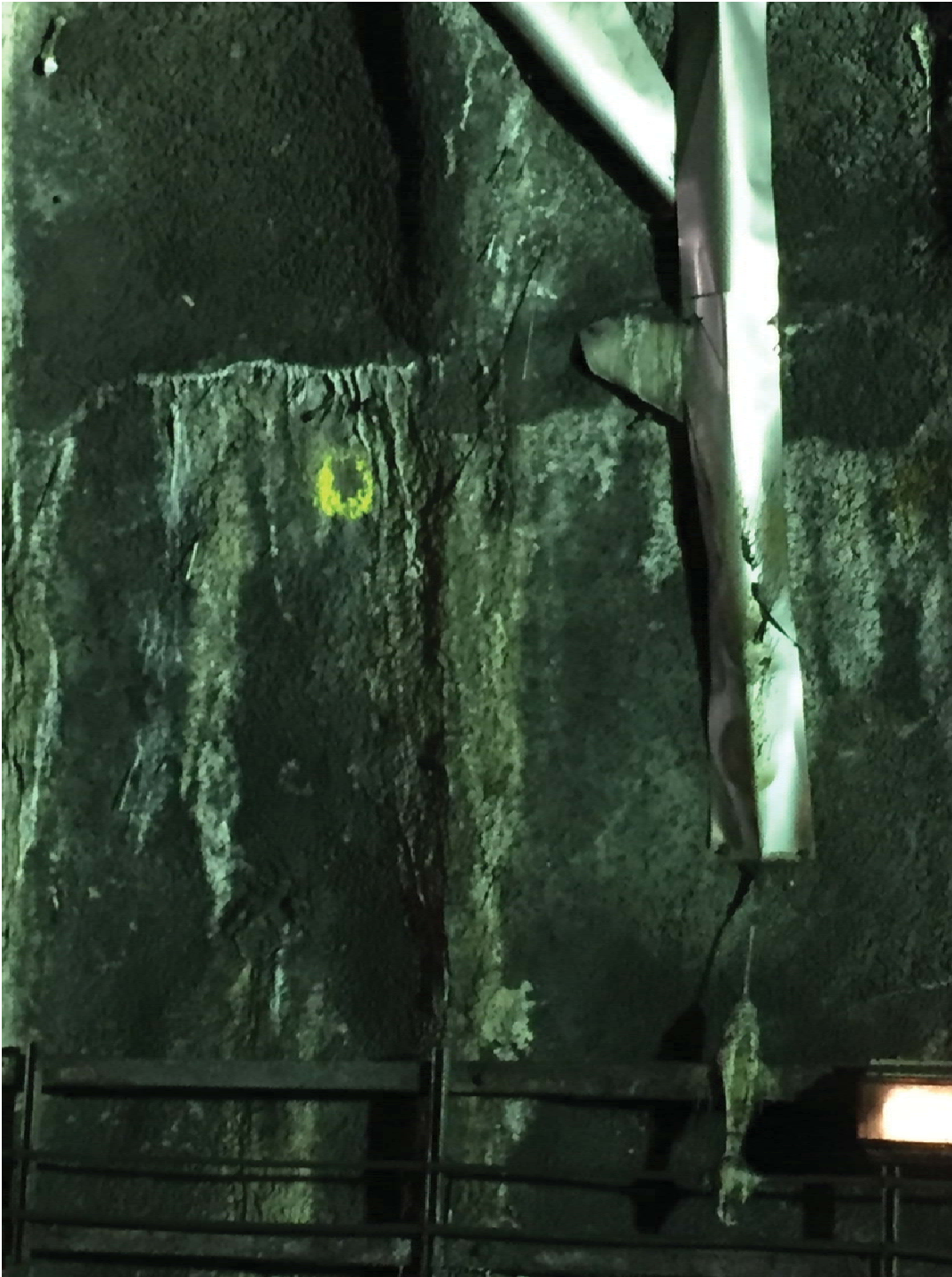


Figure 8: Completed and finished boring hole.



# Inspection Form

FOIA Exemption: All (b)(6)

Form FTA-IR-1

United States Department of Transportation  
Federal Transit Administration

### Agency/Department Information

Inspection Date	YYYY	MM	DD	Report Number	20170731-WMATA-AG-1		
	2017	07	31				
Rail Agency Name	Washington Metropolitan Area Transit Authority			Rail Agency Department	TRST	Sub-Department	
Rail Agency Department Contact Information	Name		Email		Office Phone		Mobile Phone
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
	[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
Inspection Location	K-Line, track 2, East Falls Church (K05) to Ballston (K04)						

### Inspection Summary

Inspection Activity #	1	2	3	4	5	6
Activity Code	TRK-JSB-OBS	TRK-WI-PI				
Inspection Units	1	1				
Inspection Subunits	1	1				
Defects (Number)	0	6				
Recommended Finding	No	Yes				
Remedial Action Required <sup>1</sup>	No	Yes				
Recommended Reinspection	No	Yes				

### Activity Summaries

Inspection Activity #	1	Inspection Subject	Job Safety Briefing				Activity Code	TRK	JSB	OBS	
Job Briefing Employee Name/Title	TRST 6126		Accompanied Inspector?	Yes	Out Brief Conducted	Yes	Time	1000-1300	Outside Shift	No	
Related Reports	N/A		Related CAPS / Findings	N/A							
Related Rules, SOPs, Standards, or Other	Ref	Rule or SOP		Standard		Other / Title		Checklist Reference			
	RWPM										
	MSRPH										
Inspection Location	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	Track Type	At-grade	Tunnel	Elevated	N/A
	X							X			
Line(s)	K-Line	Track Number	track 2	Chain Marker and/or Station(s)		From		To			
						East Falls Church (K05)		Ballston (K04)			
Vehicles	Head Car Number		Number of Cars		Equipment	N/A					
	N/A		N/A								
Description	FWSO Inspectors received a job safety briefing from the roadway worker in charge (RWIC) at East Falls Church (K05) prior to entering the roadway. The briefing covered the type of track protection (i.e., Train Approach Warning (TAW)), working limits, where to clear, known hazards and hotspots, the safety						Number of Defects		0		
							Recommended Finding?		No		
							Remedial Action Required?		No		
							Recommended Reinspection?		No		

<sup>1</sup> The rail transit agency must provide FTA with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing FTA verification inspections to ensure corrections are sufficient and effective.

Inspector in Charge - Signature	<b>ADAM ANTHONY GIOVANDO</b>	Digitally signed by ADAM ANTHONY GIOVANDO DN: c=US, o=U.S. Government, ou=FRA FRAFTWorthTX, ou=DOT FRAFTWorthTX, cn=ADAM ANTHONY GIOVANDO Date: 2017.08.01 14:59:53 -05'00'	Date
Inspector in Charge - Name	Adam Giovando	Inspection Team	Bob Maniuszko, Lee Emard, Mike Vitale



	rule of the day, location of nearest hospital, a check of personal protective equipment (PPE), and roadway worker protection (RWP) ID.										
	<b>No exceptions were taken during the briefing.</b>										
<b>Remedial Action</b>	N/A										
<b>Inspection Activity #</b>	2	<b>Inspection Subject</b>	Remedial Action Follow Up				<b>Activity Code</b>	TRK	WI	PI	
<b>Job Briefing Employee Name/Title</b>	TRST 6126		<b>Accompanied Inspector?</b>	Yes	<b>Out Brief Conducted</b>	Yes	<b>Time</b>	1000-1300	<b>Outside Shift</b>	No	
<b>Related Reports</b>	20170510-WMATA-WP-1 20160731-WMATA-RPM-1		<b>Related CAPS / Findings</b>		Remedial Action: 905, 906, 907, 1304						
<b>Related Rules, SOPs, Standards, or Other</b>	Ref		Rule or SOP		Standard		Other / Title		Checklist Reference		
	RWPM										
	MSRPH										
<b>Inspection Location</b>	Main Track	Yard	Station	OCC	RTA Facility	FTA Office	<b>Track Type</b>	At-grade	Tunnel	Elevated	N/A
	X							X			
<b>Line(s)</b>	K-Line	<b>Track Number</b>	track 2	<b>Chain Marker and/or Station(s)</b>	From			To			
					East Falls Church (K05)			Ballston (K04)			
<b>Vehicles</b>	<b>Head Car Number</b>		<b>Number of Cars</b>		<b>Equipment</b>	N/A					
	N/A		N/A								
<b>Description</b>	FWSO Inspectors performed a track inspection on track two of the K-Line between East Falls Church (K05) and Ballston (K04) to inspect track conditions and follow up on previously-issued remedial actions.							<b>Number of Defects</b>		6	
								<b>Recommended Finding?</b>		Yes	
								<b>Remedial Action Required?</b>		Yes	
	<p><b>The following color-coded defects were observed:</b></p> <ul style="list-style-type: none"> <li>TRST 1000 Manual, Table 5-21: Loose bolt in joint bar at K2 394+00 (Yellow condition).</li> <li>TRST 1000 Manual, Table 5-21: Loose bolt in joint bar at K2 385+00 (Yellow condition).</li> <li>TRST 1000 Manual, Table 5-21: Two loose bolts and one wrong size bolt in joint bar at K2 373+00 (Yellow condition).</li> <li>TRST 1000 Manual, Table 5-21: Loose bolt in joint bar at K2 345+00 (Yellow condition).</li> </ul> <p><b>The following non-color-coded defects were observed:</b></p> <ul style="list-style-type: none"> <li>TRST 1000 Manual, 13.5.2: Broken third rail anchor at K2 355+20.</li> <li>TRST 1000 Manual, 10.17.4.1: Relay rail stored within 4 inches of third rail. Remedial action for this defect is addressed in WMATA's approach to Remedial Action #1304.</li> </ul> <p><b>The following remedial actions were verified as complete:</b></p> <ul style="list-style-type: none"> <li>Remedial Action #905: WMATA has removed oxygen cylinders at K2 355+30.</li> <li>Remedial Action #906: WMATA has removed oxygen cylinder at K2 383+00.</li> <li>Remedial Action #907: WMATA has removed diesel canisters at K2 397+20.</li> <li>Remedial Action #187: WMATA has repaired signal masts at crossing in West Falls Church Yard.</li> </ul>							<b>Recommended Reinspection?</b>		Yes	
<b>Remedial Action</b>	<p>To achieve compliance with WMATA's requirements:</p> <ul style="list-style-type: none"> <li>WMATA must tighten bolts in the joint bar located at K2 394+00.</li> <li>WMATA must tighten bolts in the joint bar located at K2 385+00.</li> <li>WMATA must tighten and install proper bolts in the joint bar located at K2 373+00.</li> <li>WMATA must tighten bolts in the joint bar located at K2 345+00.</li> <li>WMATA must repair the third rail anchor at K2 355+20.</li> </ul>										