750 First St. NE • Ste. 900 • Washington, D.C. 20002 Office: 202-384-1520 • Website: www.wmsc.gov

Improper Door Operations – West Hyattsville, Downtown Largo, Deanwood, Smithsonian stations

March 7, 2023 – July 12, 2023 – July 14, 2023 – August 23, 2023

Document Purpose

This WMSC written report on WMATA Metrorail's safety event investigations and review of Metrorail's findings in accordance with the WMSC Program Standard, in conjunction with the attached Metrorail investigation reports that have undergone WMSC staff review and, if necessary, feedback and revision, describes the investigation activities, identifies factors causing or contributing to the safety events, and sets forth ongoing, additional, or upcoming corrective actions and further oversight work (such as inspections and audits) as necessary or appropriate. The WMSC's ongoing oversight during the investigative process, including safety event reporting and verification, participation in investigative interviews, data review, consistent communication with the Metrorail investigations team, and feedback on Metrorail's reports leads to further improvements prior to consideration of the reports by WMSC Commissioners for adoption. The WMSC's safety event investigation oversight assures the sufficiency and thoroughness of Metrorail's investigations. The WMSC Commissioners are considering these documents (the WMSC review and Metrorail's investigation reports) as a unified item for adoption at the Washington Metrorail Safety Commission meeting on June 11, 2024.

WMSC staff recommend adoption of these investigations.

Improper Door Operation

In 2023, improper door operations events accounted for 16 of the 859 total safety events reported by Metrorail to the WMSC. Direct causes of improper door operations can include human factors (such as pressing a button to open doors on the wrong side or opening doors when the train is not on the platform) or mechanical defect. Three investigations covered by this report relate to an operator incorrectly commanding doors to open on the incorrect side of the train. The other investigation relates to an operator incorrectly stopping a train short of the required location, then opening the doors on the platform side but without all doors on the platform. Investigations into other 2023 improper door events have also progressed and are addressed in other reports.

As a mitigation related to improper door operation, Metrorail completed its required safety certification steps for the use of automatic door operation on the Red Line, leading to the WMSC's concurrence that Metrorail had completed this hazard identification, verification, and mitigation process, and began implementing automatic door operation on the Red Line in fall 2023. Metrorail is in the process of certifying train operators on other lines on the use of automatic door operation that is necessary to ensure proper and safe operation. Metrorail is utilizing an aspect of the automatic door operation system that is designed to automatically open doors on the correct side of the train when the train is properly berthed in a station. Metrorail is requiring train operators to manually close doors after visually assuring that it is safe to do so.

Metrorail is implementing corrective action plans (CAP C-0181) associated with the WMSC's Rail Operations Audit issued in April 2022. Metrorail has committed to completing this CAP in October 2024. This CAP addresses consistent supervisory oversight, effective training, safety promotion, "just culture," and other elements Metrorail has committed to in its Public Transportation Agency Safety Plan (PTASP).

Investigations W-0301-W-303 being considered at the June 11, 2024, meeting led to specific corrective actions including:

- Retraining on door operations and station servicing procedures
- SOP 40 (Procedure for Platform Berthing, Station Servicing and Overruns) was reissued

In addition, Metrorail is planning to implement "point and call" practices for train operators, which provide for actions that increase attention to specific tasks and details. Under this practice, operators physically (point) and verbally (call) acknowledge safety and operational indications on the train and wayside.

Safety event summaries:

W-0300 – West Hyattsville Station – March 7, 2023 (WMATA ID: E23154)

A Train Operator servicing West Hyattsville Station opened the train doors on the non-platform side of the train. Metrorail policy requires train operators to observe the platform with their hands at their sides before initiating the Door Open pushbutton for manual door operation. Vehicle Monitoring and Diagnostic System data shows that the doors were open for approximately 20 seconds. The Train Operator then closed the doors and reported this improper door operation to the Rail Operations Control Center. However, the Train Operator left the cab and used a cell phone to contact the Assistant Operations Manager instead of reporting the safety event via radio to the Radio Rail Traffic Controller, as specified by Metrorail policy. The Train Operator later stated that they were having issues with their radio console when trying to contact the Radio Rail Traffic Controller and became nervous, so they decided to exit the train and call the ROCC Assistant Operations Manager via cellphone. The Assistant Operations Manager instructed the Train Operator to offload customers from the train onto the platform and to notify the Radio Rail Traffic Controller via radio. The Train Operator notified the Rail Traffic Controller via handheld radio when the train was clear of passengers and was instructed by the Radio Rail Traffic Controller to perform a ground walkaround. The ground walkaround was necessary to ensure no customer or object had fallen from the train while the doors were open on the incorrect side of the train. Nothing was found. An Office of Rail Transportation Supervisor was dispatched, and later arrived, to take over operation of the out-of-service train and to remove the Train Operator from service for post-event toxicology testing. The train was operated to Greenbelt Rail Yard for a post-event inspection that found no mechanical issues. During an investigative interview, the Train Operator stated they were distracted by personal matters, and were experiencing fatigue at the time of the event due to trouble sleeping and it being an overtime assignment. The Train Operator also stated that this was their first time operating on the Green Line in several years. Review of the Train Operator's certification records showed that Metrorail had designated them as certified despite not meeting Metrorail's written requirements. The Train Operator had failed an initial exam in July 2022 but was then permitted to complete an additional attempt in September 2022, beyond Metrorail's time limit to take such an exam. The WMSC issued an order in February 2024 requiring Metrorail to correct its noncompliance with its train operator certification requirements. Metrorail is also in the process of implementing a corrective action plan to require and implement physical characteristics and territory familiarization training and qualification.

The causes and contributing factors include:

- Insufficient fitness for duty checks
- Metrorail ignoring its fatigue management policy
- Lack of physical characteristics training and qualification.

W-0301 – Downtown Largo Station – July 12, 2023 (WMATA ID: E23479)

A Train Operator operating an eight-car Blue Line train to Downtown Largo Station stopped short of the required location at the end of the platform where all trains are required to stop (eight-car marker) and opened the train's doors on the platform side with the trailing doors of the train not on the platform. The Train Operator stopped approximately 30 feet (just under half of a car length) short of the required location at the end of the platform.

The Train Operator was behind schedule as they came to the station. The Terminal Supervisor subsequently informed the Train Operator that that they had opened the doors without all doors on the platform, due to stopping short of the eight-car marker.

Separately, just before that Train Operator had entered Downtown Largo Station, a different Train Operator walking through an out-of-service train at the Downtown Largo Station platform reported to the Terminal Supervisor that they had found a pair of emergency doors (the normal passenger doors in the middle of each railcar that can be opened via interior emergency release) on railcar 7373 open on the non-platform side. This was unrelated to the other train's improper door operation.

Probable Cause:

The probable cause of this event was noncompliance with written operational rules and procedures. Specifically, safety rules and procedures requiring all trains to stop at the end of each station platform to ensure doors are opened only when all cars are at the platform.

W-0302 – Deanwood Station – July 14, 2023 (WMATA ID: E23488)

A Train Operator servicing Deanwood Station inadvertently opened the train doors on the non-platform side of the train. The Train Operator properly reported this improper door operation to the Radio Rail Traffic Controller in the Rail Operations Control Center and requested permission to perform a ground walkaround to ensure no one had fallen onto the roadway. Review of vehicle monitoring and diagnostic system data showed that train doors were open on the non-platform side of the train for approximately 9 seconds. Riders were offloaded to the platform, and the Train Operator performed the ground walk around and reported that the roadway was clear. Office of Rail Transportation Supervisors were dispatched to take over train operation and to remove the Train Operator from service for post-event toxicology testing. The train was removed from service for post-event inspection. No mechanical issues or damage were found. During an investigative interview, the Train Operator stated they were distracted by activity on the platform.

Probable Cause:

The probable cause of this event was a lack of focus and situational awareness.

W-0303 – Smithsonian Station – August 23, 2023 (WMATA ID: E23592)

A Train Operator servicing Smithsonian Station opened doors on both the platform and non-platform sides of the train, then exited the train and reported the improper door operation to the Button Rail Traffic Controller via cellphone, instead of using the carborne or handheld radio as required by Metrorail. Operators have reported to the WMSC that they can

be concerned about reporting safety issues on the radio due to the reaction of others. Review of vehicle monitoring and diagnostic system data showed that the Train Operator correctly activated the Door Open pushbutton on the platform side of the train and then incorrectly activated the Door Open pushbutton on the non-platform side of the train. The Train Operator closed the non-platform side doors approximately 18 seconds later, and then closed the platform side doors as well, before again opening the correct platform side doors, and keying down (turning off) the train. The Rail Traffic Controller instructed the Train Operator to offload riders from the train and perform a ground walkaround. The Train Operator reported that the roadway was clear. An Office of Rail Transportation Supervisor was dispatched to takeover train operation and to remove the Train Operator from service for post-event toxicology testing. The train was removed from service for post-event inspection. No mechanical issues or damage were found. During an investigative interview, the Train Operator stated they lost situational awareness.

Probable Cause:

The probable cause of this event was a lack of focus and situational awareness.

Washington Metropolitan Area Transit Authority
Department of Safety (SAFE)
Office of Safety Investigations (OSI)

FINAL REPORT OF INVESTIGATION A&I E23154

Date of Event:	March 7, 2023
Type of Event:	Improper Door Operation
Incident Time:	07:32 hours
Location:	West Hyattsville Station, Track 1
Time and How received by SAFE:	07:51 hours MAC Desk
WMSC Notification Time:	08:12 hours
Responding Safety Officers:	None
Rail Vehicle:	Train 515 - [L3071x3070.3020x3021.3092-3093T]
Injuries:	None
Damage:	None
Emergency Responders:	MTPD
SMS I/A Number	20230307#106667

West Hyattsville Station – Improper Door Operation

March 07, 2023

Table of Contents

Abbreviations and Acronyms

AOM	Assistant Operations Manager
ARS	Audio Recording System
CAP	Corrective Action Plan
CCTV	Closed-Circuit Television
IIT	Incident Investigation Team
MTPD	Metro Transit Police Department
MSRPH	Metrorail Safety Rules and Procedures Handbook
NOAA	National Oceanic and Atmospheric Administration
RTC	Rail Traffic Controller
RTRA	Office of Rail Transportation
ROCC	Rail Operations Control Center
SAFE	Department of Safety
SMS	Safety Measurement System
SPOTS	System Performance On-Time Summary
VMS	Vehicle Monitoring System
WMATA	Washington Metropolitan Area Transit Authority
WMSC	Washington Metrorail Safety Commission

Executive Summary

**Note that all times listed are approximate and may contain minor variations due to differences between systems of record. **

On Tuesday, March 7, 2023, at 07:32 hours, the Train Operator of Train ID 515 [L3071x3070.3020x3021.3092-3093T] located at West Hyattsville Station on track 1 opened the train doors off the platform side, closed the doors, then reported the event to the Rail Operations Control Center (ROCC). The Train Operator was instructed by the Radio Rail Traffic Controller (RTC) to offload the train and perform a ground walkaround. There was no damage or injuries resulting from this event.

The Radio RTC instructed a Rail Supervisor to respond to West Hyattsville Station. Metro Transit Police Department (MTPD) was also notified and dispatched. The Station Manager at West Hyattsville Station was instructed to help offload the train. At 07:48 hours, trains began to single track at West Hyattsville Station.

The Rail Supervisor arrived at West Hyattsville Station and took over the train. They operated in non-revenue service to Greenbelt Yard. Normal rail service resumed at 08:18 hours.

The Office of Rail Transportation (RTRA) removed the Train Operator from service for post-incident testing. The train was removed from service for post-incident inspection.

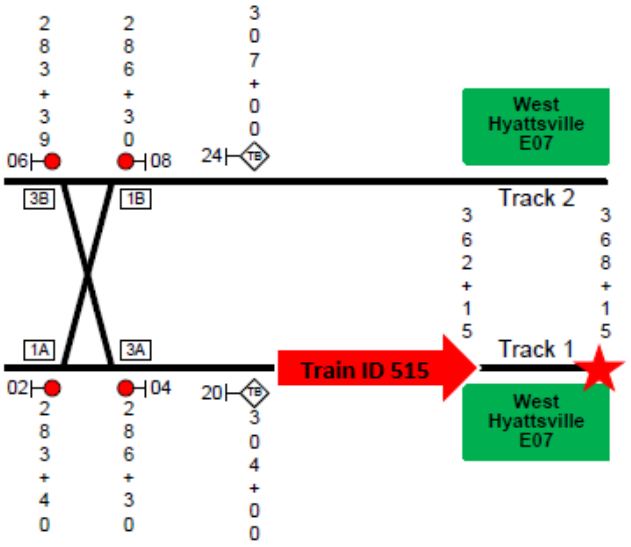
During the investigation, the Train Operator reported several non-work-related events that may have contributed to them losing focus during operations. In addition, the Train Operator was working an overtime assignment on the Green Line, which is not their normal assignment.

The probable cause of the Improper Door Operation event on March 7, 2023, was a failure to perform door operations in accordance with established procedures. Specifically, the Train Operator failed to observe the platform from the cab window with their hands at their sides prior to depressing the Doors Open Pushbutton as prescribed in RTRA Standard Operating Procedures (SOP) 40. A Contributing Factor to the event was distraction due to non-work-related personal events.

Incident Site

West Hyattsville, Track 1

Field Sketch/Schematics



The above depiction is not to scale.

Purpose and Scope

The purpose of this accident investigation and candid self-evaluation is to collect and analyze available facts, determine the probable cause(s) of the incident, identify contributing factors, and make recommendations to prevent a recurrence.

Investigative Methods

The investigative methodologies included the following:

- Physical Site Assessment through document and video review

- Formal Interviews – SAFE interviewed one individual as part of this investigation. The interview included persons present at, during, and after the incident, those directly involved in the response process, and representatives from the Washington Metrorail Safety Commission (WMSC). SAFE interviewed the following individual:
    - Train Operator

- Documentation Review – Collection of relevant work history information and process documentation contained in WMATA systems of record. These records include:
    - Train Operator Training Records
    - Train Operator Certifications
    - Train Operator 30-Day work history review
    - Metrorail Safety Rules and Procedures Handbook (MSRPH)
    - National Oceanic and Atmospheric Administration (NOAA)
    - Rail Operations Control Center (ROCC) Incident Report

- System Data Recording Review – Collection of information contained in Metro Data Recording Systems. This data includes:
    - ARS (Audio Recording System) playback [Radio and Landline Communications]
    - The Office of Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT) Vehicle Monitoring System (VMS)
    - Closed-Circuit Television (CCTV)
    - System Performance On-Time Summary (SPOTS) Report

Investigation

On Tuesday, March 7, 2023, at 07:36 hours, the Train Operator of Train ID 515 [L3071x3070.3020x3021.3092-3093T] located at West Hyattsville Station, track 1 opened the train doors off the platform side, closed the doors then reported the event to the ROCC. The Train Operator was instructed by the Radio RTC to offload the train and perform a ground walk around. There was no damage or injuries resulting from this event.

The Radio RTC instructed a Rail Supervisor to respond to West Hyattsville Station. MTPD was notified and dispatched. The Station Manager located at West Hyattsville Station was instructed to help offload the train. At 07:48 hours, trains began to single track at West Hyattsville Station.

The Train Operator reported working overtime at the time when this event occurred. During the formal interview, the Train Operator stated that it was not their first time operating on the Green Line, however it had been a while since the last time that they had.

After opening the doors off the platform side, the Train Operator contacted the ROCC Assistant Operations Manager (AOM) at 07:34 hours to report that they had opened the doors on the non-platform side. The AOM inquired why the Train Operator did not contact the Radio RTC to report the event. The Train Operator reported that the train console radio was having issues and that they were nervous, so they called via landline. The AOM instructed the Train Operator to offload their train and to notify the Radio RTC of the improper door operation. At 07:38 hours, the Train Operator contacted the Radio RTC and reported that they had offloaded the train.

Closed-Circuit Television (CCTV) revealed that the Train Operator stopped at the 8-car marker and pressed the left side door open push button before they stuck their head out of the operator's cab window to verify they were opening the platform side doors.

When the Train Operator realized their mistake, they closed the doors and contacted the ROCC. At 07:41 hours, the Radio RTC granted the Train Operator permission to conduct a ground walkaround. At 07:45 hours, the Train Operator informed the Radio RTC that they completed their ground walkaround and it was clear. An RTRA Supervisor took over the train's operations and the Train Operator was removed from service for post-incident testing. Normal rail service resumed at 08:18 hours.

Chronological Event Timeline
A review of ARS playback, i.e., phone and radio communications, revealed the following timeline:

Time	Description
07:34:21 hours	Train Operator: Contacted the ROCC AOM to inform them that they were at West Hyattsville Station, and they opened the doors on the opposite side of the platform. The Train Operator was unable to reach the Radio RTC and the ROCC AOM instructed the Train Operator to give a radio check. [Phone]
07:36:33 hours	Train Operator: Informed the Radio RTC they needed to offload the train and complete a ground walkaround. Radio RTC: Asked several times why the Train needed to be offloaded. [Ops 3]
07:38:01 hours	Train Operator: Informed the Radio RTC they had offloaded their train. [Ops. 3]
07:38:12 hours	Radio RTC: Instructed the Train Operator to give a radio check and complete a ground walkaround. [Ops. 3]
07:39:00 hours	Train Operator: Contacted the Radio RTC for a radio check and to verify a clear ground walkaround. [Ops. 3]
07:39:24 hours	Station Manager: Informed the Radio RTC there were 3 customers still on the train. Radio RTC: Asked the Station Manager to key the customers off. [Ops. 3]
07:41:06 hours	Radio RTC: Granted the Train Operator permission to enter the roadway to conduct ground walkaround. [Ops. 3]
07:45:00 hours	Train Operator: Reported a good ground walkaround and they were back on board the train. [Ops. 3]
07:46:02 hours	ROCC AOM: Contacted West Falls Church Division to inform them that the Train Operator opened the doors on the opposite side of the platform. [Phone]
07:48:01 hours	Radio RTC: Instructed the Train Operator to stand by at West Hyattsville. [Ops. 3]
08:06:46 hours	Radio RTC: Contacted an RTRA Supervisor and instructed them to take over train operations when they arrived at West Hyattsville Station and keep the Train Operator on board with them. [Ops. 3]
08:15:48 hours	Train was released by Transit and the RTRA Supervisor was operating the train. [Ops. 3]

***Note: Times above may vary from other system's timelines based on clock settings and reporting source.*

SPOTS Report

Select Platform: E07-1 and/or Select ID: Leave blank to remove criteria
and/or Select 4-digit car number: Leave blank to remove criteria
Select Date: Mar 7 2023 Select Times (0-24HRS): From 07:00 To 08:00
Generate Report

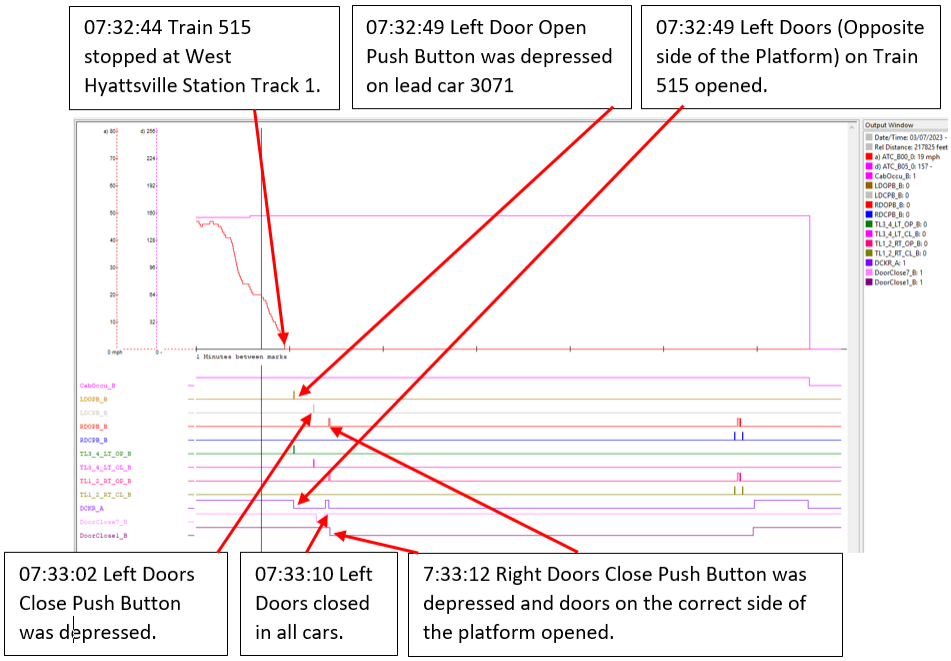
ID	Platform	length	dcode	Right door open	Right door close	dwell	Left door open	Left door close	dwell	Head Arrived	Tail cleared	cars	Headway door open to door open
511	E07-1	6	44	07:01:48	07:02:10	22				07:01:22	07:02:31	2041-2040.3058-3059.3208-3209	-
512	E07-1	6	44	07:06:22	07:06:39	17				07:05:51	07:06:58	3102-3103.3099-3098.3156-3157	4:34
513	E07-1	6	44	07:13:41	07:14:00	19				07:13:11	07:14:19	3122-3123.3010-3011.3247-3246	7:19
514	E07-1	6	44	07:23:58	07:24:16	18				07:23:28	07:24:35	3005-3004.3219-3218.3158-3159	10:17
715	E07-1	6	92	07:33:16	07:37:47	271	07:32:54	07:33:14	20	07:32:20	08:16:18	3071-3070.3021-3020.3093-3092	8:56

The Office of Chief Mechanical Officer (CMOR) / Vehicle Monitoring System (VMS)
Adopted from CMOR IIT report with minor formatting and grammatical edits:

"IIT completed the data analysis of the incident below. Based on the data. The Left Door Open Push Button was depressed causing the doors on the opposite side of the platform to open (West Hyattsville is a split platform. The doors on the left of the train were on the opposite side). A few moments later, the Left Door Close Push Button was depressed and the Left Doors Closed. Eventually the Right Door Open Push Button was depressed and the doors on the platform side opened. No Train defects were observed during the data analysis, the Train responded to the commands entered by the Train Operator."

Timeline of Events

Time	Description of Events
07:32:44	Train 515 stopped at West Hyattsville Station Track 1.
07:32:49	Left Door Open Push Button was depressed on lead car 3071
07:32:49	Left Doors (Opposite side of the Platform) on Train 515 opened.
07:33:02	Left Doors Close Push Button was depressed.
07:33:10	Left Doors closed in all cars.
07:33:12	The Right Doors Open Push Button was depressed and doors on the correct side of the platform opened.



Office of Rail Transportation (RTRA)
Adopted from RTRA report: See Appendix C

Interview Findings
As part of the investigation launched into the event, SAFE interviewed one person. The interview identified the following key findings associated with this event. Findings detailed below include reported information from involved personnel and may conflict with other data sources contained in the report.

During the interview, the Train Operator stated they were completing overtime the day this event happened. The Train Operator is from Dulles division. The Train Operator mentioned it has been a while since they last operated on the green line and were not that familiar with the stations. The Train Operator knew the proper procedures when servicing a station. The Train Operator mentioned they typically keep their hand away from the door push buttons until they verify the platform side but during this event, they pushed the door open button prior to verifying the platform side. The Train Operator realized they were on the non-platform side when they saw a customer stick their head out the door and wave. The Train Operator mentioned they called the ROCC AOM because when they tried to call via radio, they were having radio issues on the console and were nervous, so they called using a telephone. They also mentioned dealing with non-work-related issues that may have contributed to their loss of focus and a short sleep cycle prior to coming to work.

Weather

On March 7, 2023, at the time of the incident, NOAA recorded the temperature as 43° F, with mostly sunny skies. Weather was not a contributing factor in this incident. (Weather source: NOAA) – Location: Hyattsville, MD.)

Related Rules and Procedures

SOP 40 – 6.1.5

- D. Verify the platform side of the train by placing their head out of the cab window and first look and identify the platform.
- E. Look at the doors on the platform side of the train to observe any activity in front of the doors, with hands to their side for five (5) seconds.
- F. Depress the Car's Open Doors button on the platform side of the train.

Human Factors

Training and Certifications

The Train Operator was last certified in their position in July 2022. They passed with a QL-1 (highest) rating but failed their written exam. They passed the written exam on the second attempt in September 2022.

Fatigue

Signs and Symptoms of Fatigue

We evaluated conditions at the time of the incident to distinguish whether evidence of fatigue was present. No video of the person involved was available to ascertain whether evidence of fatigue was present. The Train Operator reported feeling moderately at the time of the incident. The Train Operator reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

We evaluated incident data for fatigue risk factors. Risk factors for fatigue were present. The incident time of day did not suggest an increased risk of fatigue-related impairment. The Train Operator reported some variation in the sleep schedule in the days leading up to the incident. The Train Operator worked day shift in the days leading up to the incident. The Train Operator was awake for 3 hours at the time of the incident. The Train Operator reported a short sleep duration of 5.5 hours in the 24 hours leading up to the incident. The off-duty period was 37 hours, an opportunity for 7-9 hours of sleep. This was a comparable amount of sleep as the Train Operator's usual workday sleep durations. The employee reported some issues with sleep due to recent death's in their family.

Post-Incident Toxicology Testing

WMATA's Drug and Alcohol Program determined that the personnel involved complied with the Drug and Alcohol Policy and Testing Program 7.7.3/6.

Findings

- The Train Operator was working an overtime assignment on a line they had not operated on for a long time.
- The Train Operator admitted that they pushed Door Open Pushbutton before verifying they were on the platform side.
- The Train Operator reported personal issues that may have distracted them at the time of the event.
- There were no mechanical issues identified with the train.
- The Train Operator was completing their first-round trip.
- The Train Operator initially called the ROCC AOM to report the event and not the Radio RTC.

Immediate Mitigation to Prevent Recurrence

- The Train Operator was removed from service for post-incident testing.
- The incident train was removed from service for post-incident inspection.

Probable Cause Statement

The probable cause of the Improper Door Operation event on March 7, 2023, was a failure to perform door operations in accordance with established procedures. Specifically, the Train Operator failed to observe the platform from the cab window with their hands at their sides prior to depressing the Doors Open Pushbutton as prescribed in RTRA Standard Operating Procedures (SOP) 40. A Contributing Factor to the event was distraction due to non-work-related personal events.

Recommended Corrective Actions

Corrective Action Code	Description	Responsible Party	Estimated Completion Date
106667_SAFECAPS_RTRA_001	The Train Operator will complete refresher training with an emphasis on SOP 40.	RTRA	Completed
106667_SAFECAPS_RTRA_002	An RTRA Supervisor will conduct a ride along with the Train Operator to verify adherence to SOP 40.	RTRA	Completed

Appendices

Appendix A – Interview Summary

The narrative below summarizes the statements made by the personnel involved. As such, times and details may conflict with the data contained in systems of record.

The Train Operator has been a WMATA employee for thirteen (13) years with six and a half (6.5) of those years as a Train Operator. The Train Operator is RWP Level 2 certified and will have to be recertified in January 2024. The Train Operator was last certified as a Train Operator on September 9, 2022. The Train Operator stated they felt moderately alert leading up to improper door operation. The Train Operator reported they have been having trouble sleeping lately due to recent deaths of members. The Train Operator stated they usually get about 6 hours of sleep on workdays.

The Train Operator stated it was a normal workday for them. The Train Operator stated they only operated on the green line for overtime and that this was the first time in a few years. The Train Operator stated they are not as familiar with the Green as they are with the Silver Line. The Train Operator did not experience any mechanical or radio issues while they were operating the train. The Train Operator reported being nervous when the improper door operation occurred, so they used their phone to contact central. The Train Operator stated they may have had family matters on their mind as they entered the station. The Train Operator explained the door operation procedures for a legacy train and a 7000-series train. The Train Operator stated they pushed the door open push button before they completely verified that they were on the platform side. The Train Operator stated they did not fully realize what they did until they saw a customer stick their head out the door and wave at them from the off-platform side.

Appendix B – Train Operator Certification

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION

[redacted] Division: West Falls Date: 07-12-2022

Reason for Certification: *Please place a check in an area below.*	Training Time Received: *Please record training time in an area below.*
☐ Certification: Student ☐ Pre-certification: Student ☐ Division Request	Rail Training: Weeks: ____ Days: ____ Hours: ____ OJT: ____
☒ Re-Certification ☐ Return to Duty ☐ Other____	Division Training: Weeks: ____ Days: ____ Hours: ____ OJT: ____
	NOTE: OJT time is not separate from Weeks/Days/Hours.

Exam Administered	Score	Date Taken
MSRPH version #:	74 %	7-12-22
TVOIM/TOIM	94 %	7-12-22
Supervisor Combination	%	
Practical attempt #: 1	QL- 1	7-12-22

Equipment *(current/working condition)*	Yes	No
MSRPH	✓	
Perm/Temp/Special Orders	✓	
Troubleshooting Guide	✓	
Flashlight	✓	
Safety Vest	✓	
Footwear	✓	
Identification (One Badge, RWP)	✓	

Corrective Actions Required	Date Due	Complete	Initials
Operator [redacted] needs to retake the TVOIM CBT.			
Forwarded to:	Date:		

Certification Information: *To be completed by QA/QC Staff*		Signatures: [redacted]	Date:
Emp. No: [redacted]	Date of Birth: 09/06		7/12/22
Date Last Qualified:	Certification Class:		7-12-22
Due Date Next Qualification:	Corrective Lenses: NO		
Date Qualification Expires:	Restrictions:		

Rev. June 5, 2020 - RTRA QA/QC TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION Page 1

Attachment 1 - Recertification July 2022 Page 1 of 2

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION (continuation sheet) Emp No. [redacted] Date: 7-12-22

CATEGORIES / SUBCATEGORIES	QUALITY LEVEL	REMARKS (*Remarks are required for a quality level score of 2 or 3*) – ALL TIMES (*are in minutes*)
I. Preparation for Service	/	Cars Used: 7440-41 x 7456-57
1. Exterior Inspection	/	# 7441 Rotary, # 7441 Barrier UNS
2. Interior Inspection - Trailing Cab	/	# 7440 Missing EEK
3. Interior Inspection - Each Car	/	# 7441 Horn C/O, # 7457 Tail-Marker TLCB
4. Interior Inspection – Oper. Cab	/	# 7456 Door Valance
5. Rolling Test / Rolling Brake Test	/	
		Time Allotted: 35:00 / Actual Time: 27:00
II. Mainline Operation	/	
6. Communications	/	
7. Door Oper. & Station Stopping	/	
8. Use of Horn	/	
9. Speed Adherence/Manual Oper.	/	
10. Turn Back Moves	/	Location: K04 Time Allotted: 02:00 / Actual Time: 00:50
11. Manual Route Selection	/	Location: K06-18
12. EV Shutoff	/	Time Allotted: 00:30 (01:00) / Actual Time: 00:10
III. Yard Operation	/	
13. Communications	/	
14. Yard Movements	/	
15. Coupling	/	Time Allotted: 08:00 (12:00) / Actual Time: 6:00 Cars Used: 7331 + 7287
16. Uncoupling	/	Time Allotted: 05:00 (07:30) / Actual Time: 5:00 Cars Used: < 7286 > 7440
17. Isolation (Self-Recovery)	/	Time Allotted: 15:00 (22:30) / Actual Time: 14:00 Cars Used: 7286 x 7440
18. Manual Switch Operation	/	# 303-A
IV. Miscellaneous	/	
19. Recovery Train Operation	/	Time Allotted: 12:00 (18:00) / Actual Time: 11:00 Cars Used: 7440 + 7286
20. Troubleshooting	/	#1. NO All Doors closed (Door Control CB) Time 5 min
		#2. NO Brakes OFF (Stuck Holding Brake) Time 10 min

Rev. June 5, 2020 - RTRA QA/QC TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION Page 2

Attachment 2 - Recertification July 2022 Page 2 of 2.

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION

OFFICE OF RAIL TRANSPORTATION

[redacted]	[redacted]	Division: West Falls Church	Date: 9-2-22

Reason for Certification: *Please place a check in an area below.*	Training Time Received: *Please record training time in an area below.*
☐ Certification: Student ☐ Pre-certification: Student ☐ Division Request ☐ Re-Certification ☐ Return to Duty ☑ Other Written Exam ONLY	Rail Training: Weeks: ____ Days: ____ Hours: ____ OJT: ____ Division Training: Weeks: ____ Days: ____ Hours: ____ OJT: ____ NOTE: OJT time is not separate from Weeks/Days/Hours.

Exam Administered	Score	Date Taken
MSRPH version #: 2nd Attempt	86 %	9-2-22
TVOIM/TOIM	%	
Supervisor Combination	%	
Practical attempt #:	QL-	

Equipment *(current/working condition)*	Yes	No
MSRPH		
Perm/Temp/Special Orders		
Troubleshooting Guide		
Flashlight		
Safety Vest		
Footwear		
Identification (One Badge, RWP)		

Corrective Actions Required	Date Due	Complete	Initials
Forwarded to:		Date:	

Certification Information: *To be completed by QA/QC Staff*	
Emp. No [redacted]	Date of Birth:
Date Last Qualified:	Certification Class:
Due Date Next Qualification:	Corrective Lenses: NO
Date Qualification Expires:	Restrictions:

Sig[redacted]	Date:
Em[redacted]	9/2/22
Ex[redacted]	9-2-22
Review[redacted]	

Rev. June 5, 2020 - RTRA QA/QC TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION Page 1

Attachment 2: Recertification (Written Exam Only) September 2022 Page 1 of 2

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION (continuation sheet) Emp No.:_____ Date:_____

CATEGORIES / SUBCATEGORIES	QUALITY LEVEL	REMARKS (*Remarks are required for a quality level score of 2 or 3*) – ALL TIMES *(are in minutes)*
I. Preparation for Service		Cars Used:
1. Exterior Inspection		
2. Interior Inspection - Trailing Cab		
3. Interior Inspection - Each Car		
4. Interior Inspection – Oper. Cab		
5. Rolling Test / Rolling Brake Test		
		Time Allotted: 35:00 / Actual Time: :
II. Mainline Operation		
6. Communications		
7. Door Oper. & Station Stopping		
8. Use of Horn		
9. Speed Adherence/Manual Oper.		
10. Turn Back Moves		Location: Time Allotted: 02:00 / Actual Time: :
11. Manual Route Selection		Location:
12. EV Shutoff		Time Allotted: 00:30 (01:00) Actual Time: :
III. Yard Operation		
13. Communications		
14. Yard Movements		
15. Coupling		Time Allotted: 08:00 (12:00) / Actual Time: : Cars Used: +
16. Uncoupling		Time Allotted: 05:00 (07:30) / Actual Time: : Cars Used: < >
17. Isolation (Self-Recovery)		Time Allotted: 15:00 (22:30) / Actual Time: : Cars Used:
18. Manual Switch Operation		
IV. Miscellaneous		
19. Recovery Train Operation		Time Allotted: 12:00 (18:00) / Actual Time: : Cars Used: +
20. Troubleshooting		

Rev. June 5, 2020 - RTRA QA/QC TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION Page 2

Attachment 2: Recertification (Written Exam Only) September 2022 Page 2 of 2

Appendix C – RTRA Incident Report

Washington Metropolitan Area Transit Authority

Incident Number
20230307#106667MX

OVERVIEW

Department	Rail Station Branch Avenue
Incident Date	03/07/2023 07:36 AM
Incident Report Date	03/07/2023 08:41 AM
Maximo #	8656997
Was anyone transported from the scene for medical attention?	No
Was the facility or vehicle evacuated as a result of the incident?	No
Incident Type	Doors Opposite Platform Side
Incident Description	Operator reported opening doors on the opposite side of the platform., 12/39, E07, RTR, DOPS, 515/ Train Operator [redacted] stated that he came into the station on Track #1 and got out of his seat, put his head out the opposit window and opened the doors on the opposite side. He saw a customer waving and thats when he closed the doors. He then stated he contacted the ROCC and informed them of the incident.
People Impact	None
Asset Impact	None
Preferred Phone	
Response Level	Level 3
Recommended Response	

DETAILS

Environmental Factors

Immediate Mitigation Response	Train was offloaded and Operator was tranported for a Post Incident Medical Examination
Lighting	None
Light Conditions	Daylight
Weather	Clear

Location Information

Rail Station/Yard	WEST HYATTSVILLE STATION
Mezzanine or Other Asset	WEST HYATTSVILLE, MEZZANINE (077)
Address/Nearby Address	2700 HAMILTON ST
Region	HYATTSVILLE
State	MD
Latitude	38.95541636

Attachment 3: RTRA Incident report page 1 of 4.

Longitude	-76.96844503

OCC Information

Problem Description	Operator reported opening doors on the opposite side of the platform., 12/39, E07, RTR, DOPS, 515
Response Code	RTR
Trouble Code	DOPS
Asset	R3071
Asset Description	3071, RAIL CAR, BREDA, 3000 AC, B CAR
Asset Type	RAIL CAR
Asset ID	R3071
Vehicle Id	515
Rail Line	GRN
Serial Number	3071
Model	B CAR
Year	1985
Make	BREDA
Vendor	Breda Costruzioni Ferroviarie
Reporting Time	3/7/2023 8:41:45 AM

PROPERTY

WMATA Rail Vehicle - R3071

WMATA Asset ID	R3071
Vehicle License State	
Service Type	
Preventability Rating	Not Rated
Make	BREDA
Model	B CAR
Year	1985
Asset Type Code	
Vendor Code	721090121_00
Serial Number	3071
Body Damages	
Collision Factors	

PEOPLE

WMATA Personnel - [redacted]

Name	[redacted]
Employee #	[redacted]
Department Code	33450
Department Name	Rail Station West Falls Church

Attachment 3: RTRA Incident report page 2 of 4.

Email	[redacted]
Age Range	Adult (19 – 60)
Was this person injured?	No
Was a drug test required?	Yes
What was the Justification?	WMATA
Is this person a witness?	No
What happened before the incident?	Operator was entering the station
What happened after the incident?	Operator was transported
Was this person driving?	No
Occupant of Vehicle	WMATA Rail Vehicle - R3071
Personal Protective Equipment (PPE) Usage	
OSHA Recordable	
OSHA Injury Code	
Job Title	
Where Event Occurred	
OSHA Location	
Days Away from Work	
Days Restricted	
Private	No

FATIGUE INFORMATION

What was the employee's bed time, for the sleep period preceding the incident?	03/06/2023 10:30 PM
What time did the employee's wake up?	03/07/2023 04:05 AM
Was this the employee's sleep schedule in the last seven days, including days off?	Yes
How alert was the employee's immediately prior to the incident?	Fully Alert
Were there any behaviors suggestive of fatigue?	None Observed

SUMMARY OF FATIGUE FACTORS

Length of employee's last sleep	5 hours 35 minutes

Attachment 3: RTRA Incident report page 3 of 4.

Short prior sleep	Yes
Hours spent awake at time of incident	3 hours 31 minutes
Long wake period	No
Circadian effects on alertness at time of incident (incident between 02:00 am and 05:00 am?)	No
Circadian effects on time of sleep in week before incident	Yes
Employee alertness at incident	No
Observed fatigue behaviours	No

INVESTIGATION

General

Equipment Involved	
Known Facts	Operator reported opening doors on the opposite side of the platform., 12/39, E07, RTR, DOPS, 515
DriveCam Event #	
Key Factors	Inattention Improper Operation Procedure Not Followed Rule Violation
Root Causes	Human Performance Difficulty/Individual Performance Complication/Was a mistake made while using a procedure?/Procedures/Not Used/ Not Followed

CORRECTIVE ACTIONS

Doors Opposite Platform Side

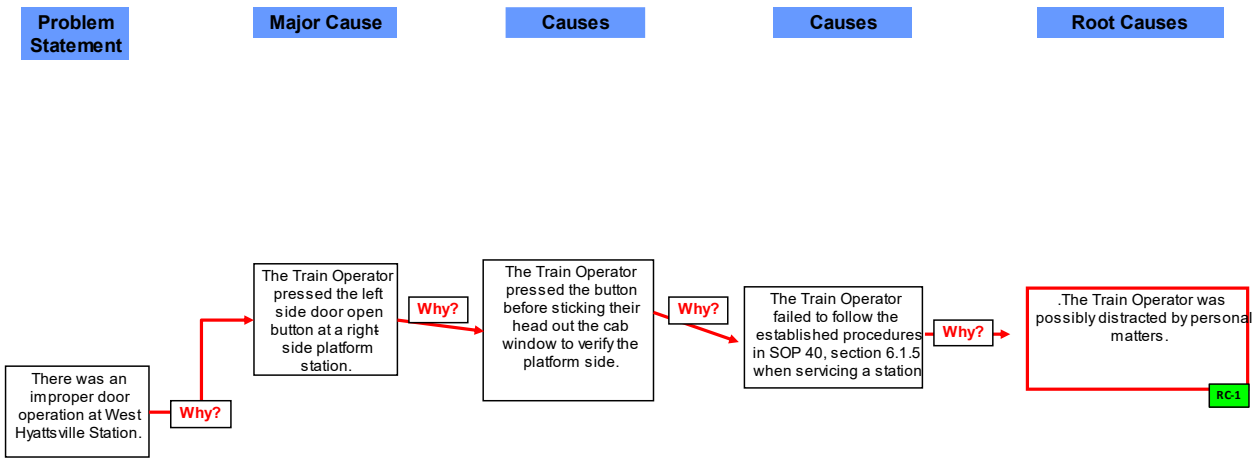
Incident	20230307#106667MX
Priority	(2) Normal
Status	Completed
% Complete	100
Start Date	04/18/2023
Corrective Action Title	Doors Opposite Platform Side
Corrective Action(s)	10 Day suspension and retraining
Target Date	04/18/2023
CAP Closure Category	In Progress

ATTACHMENTS

Original Name	File Name
[redacted]workhistory.pdf	20230307_106667MX_11512.pdf
[redacted].pdf	20230307_106667MX_11556.pdf
[redacted]1.pdf	20230307_106667MX_13342.pdf

Attachment 3: RTRA Incident report page 4 of 4.

Appendix D – Why-Tree Analysis



Root Cause Analysis

Washington Metropolitan Area Transit Authority
Department of Safety (SAFE)
Office of Safety Investigations (OSI)

FINAL REPORT OF INVESTIGATION A&I E23479

Date of Event:	July 12, 2023
Type of Event:	O-15 (a) Improper Door Operations
Incident Time:	14:16 hours
Location:	Downtown Largo Station
Time and How received by SAFE:	14:51 hours Mission Assurance Coordinator (MAC)
WMSC Notification Time:	14:20 hours
Responding Safety Officers:	None
Rail Vehicle:	Train ID 402 (L3074-75x3020-21x2053-52x2064-**65**T)
Injuries:	None
Damage:	None
Emergency Responders:	None
SMS I/A Incident Number:	20230712#109888MX

Downtown Largo Station – Improper Door Operations

Table of Contents

Abbreviations and Acronyms

AIMS	Advanced Information Management System
ARS	Audio Recording System
CAP	Corrective Action Plan
CCTV	Closed-Circuit Television
CMNT	Office of Rail Car Maintenance
CMOR	Office of Chief Mechanical Officer
COMR	Office of Radio Communication
DCKR	Door Closed Check Relay
IIT	Incident Investigation Team
LGO-YD	Largo Yard
MAC	Mission Assurance Coordinator
MSRPH	Metrorail Safety Rules and Procedures Handbook
NOAA	National Oceanic and Atmospheric Administration
OAP	Operations Administrative Policy
RTC	Rail Traffic Controller
RTRA	Office of Rail Transportation
ROCC	Rail Operations Control Center
SAFE	Department of Safety
SOP	Standard Operating Procedure
SMS	Safety Measurement System
VMS	Vehicle Monitoring System
WMATA	Washington Metropolitan Area Transit Authority
WMSC	Washington Metrorail Safety Commission

Executive Summary

**Note that all times listed are approximate and may contain minor variations due to differences between systems of record. **

On Wednesday, July 12, 2023, at 14:11 hours, Train ID 402, an eight-car consist, arrived at Morgan Boulevard Station, and the Train Operator contacted the Terminal Supervisor to inquire about the need for a train change-off for scheduling purposes. The Terminal Supervisor requested that Train Operator #1 continue in revenue service to Downtown Largo Station.

At 14:12:30 hours, Train Operator #2 informed the Terminal Supervisor that they discovered an open #9 & #10 emergency door in railcar 7373 on the non-platform side while walking through the out-of-service train on the platform. The Terminal Supervisor immediately notified the Buttons Rail Traffic Controller (RTC) at the Rail Operations Control Center (ROCC) of the open emergency door.

While on the phone with the Buttons RTC at 14:15 hours, Train ID 402, operated by Train Operator #1, reported to the Terminal Supervisor that they had verified a lunar signal at G05-02, correctly aligned rail, and crossed from track 1 to track 2. They had also berthed the train properly at the 8-car marker by placing their head out of the cab window on the platform side. The Terminal Supervisor informed Train Operator #1 that they would depart the station with the same train.

At 14:16 hours, the Terminal Supervisor received a call from the OPS 3 Buttons RTC, requesting an update on the rail service and the location of Train ID 408. During this call, the Terminal Supervisor advised Train Operator #1 that they had operated an 8-car train and stopped short of the 8-car marker, causing the train doors to open off the platform.

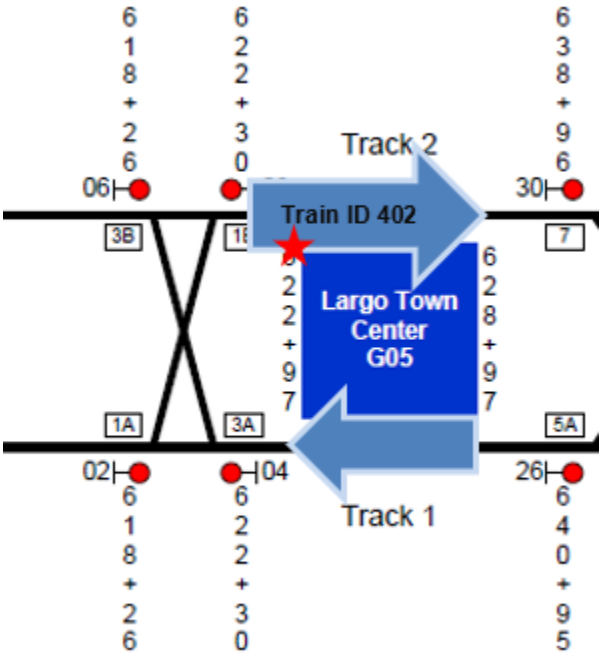
The Terminal Supervisor immediately notified ROCC that Train ID 402's trailing door on railcar 2065 was opened beyond the platform in front of the end gate railing at Downtown Largo Station. The Terminal Supervisor instructed Train Operator #1 to take Train ID 402 out of service, offload any customers on the train as they walk through it, and then conduct a ground walkaround. There were no injuries or damage resulting from this event. RTRA removed Train Operator #1 from service for post-incident toxicology testing. The train was removed from service for post-incident inspection.

The probable cause of the Improper Door Operation event on July 12, 2023, was that the Train Operator failed to follow established procedures for door operations. They failed to verify that they were properly berthed at the 8-car marker before depressing the door open push button.

Incident Site

Downtown Largo Station, Track 2 – Outside aerial structure with a center 800-foot platform.

Field Sketch/Schematics



The above depiction is not to scale.

Purpose and Scope

The purpose of this accident investigation and candid self-evaluation is to collect and analyze available facts, determine the probable cause(s) of the incident, identify contributing factors, and make recommendations to prevent a recurrence.

Investigative Methods

The investigative methodologies included the following:

- Site Assessment through document review.

- Formal Interviews – SAFE interviewed two individuals as part of this investigation. Interviews included persons present at, during, and after the incident, those directly involved in the response process, and representatives from the Washington Metrorail Safety Commission (WMSC). SAFE interviewed the following individuals:
  - Train Operator
  - Terminal Supervisor

- Informal Interviews – Collected through conversations with individuals during the investigation to provide background and supporting information. Written statements were reviewed from personnel present during the event.

- Documentation Review – Collection of relevant work history information and process documentation contained in WMATA systems of record. These records include:

- Train Operator Training Records
- Train Operator Certifications
- Train Operator 30-day work history review
- Metrorail Safety Rules and Procedures Handbook (MSRPH)
- National Oceanic and Atmospheric Administration (NOAA)
- Rail Operations Control Center (ROCC) Incident Report

- System Data Recording Review – Collection of information contained in Metro Data Recording Systems. This data includes:
  - ARS (Audio Recording System) playback, including Largo Yard (LGO-YD)/OPS Radio & Phone.
  - The Office of Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT) Vehicle Monitoring and Diagnostic System (VMDS)
  - Closed-circuit television (CCTV)
  - Advanced Information Management System (AIMS)

Investigation

On Wednesday, July 12, 2023, at 14:11 hours, the Audio Recording System (ARS) revealed that upon Train ID 402 arriving at Morgan Boulevard Station, the Train Operator contacted the Downtown Largo Station Terminal Supervisor to verify whether they needed to conduct a train change-off for scheduling due to trains being out of sync from their scheduled departure times. The Terminal Supervisor instructed that Train Operator #1 continue in revenue service to Downtown Largo Station.

According to the ARS, at 14:12:30 hours, Train Operator #2 notified the Terminal Supervisor that a customer opened the #9 emergency door in railcar 7373 on the non-platform side of the train. The Terminal Supervisor notified the Buttons RTC of the emergency door incident.

While the Terminal Supervisor was on the phone with the Buttons RTC at 14:15 hours, Train ID 402, operated by Train Operator #1, reported to the Terminal Supervisor that they verified a lunar signal at G05-02, correct rail alignment, and were crossing from track 1 to track 2. When they arrived on the platform, they would place their head out of the cab window on the platform side (following the five-second rule, hands by their side) after properly berthing the train at the 8-car marker. As the train pulled onto the platform, the Terminal Supervisor advised Train Operator #1 that they would be departing the station with the same train they arrived on.

At 14:16 hours, the Terminal Supervisor received a phone call from the OPS 3 Buttons RTC requesting an update on the rail service and the location of Train ID 408. One minute later, while still on the phone, the Terminal Supervisor advised Train Operator #1 that they were operating an 8-car train, and they stopped short of the 8-car marker, resulting in the trailing set of doors opening off the platform.

According to Closed-Circuit Television (CCTV), at 14:16:42 hours, Train ID 402, operated by Train Operator #1, stopped approximately 30 feet short of the 8-car mark on track 2 at Downtown Largo Station. At 14:16:45 hours, CCTV captured Train Operator #1 with their head out the operator's cab window and opened the train doors on the platform side of the station while the train improperly berthed. At 14:17:09 hours, CCTV captured Train Operator #1 departing Train ID 402's lead car 3074 with the train doors open and the train not berthed at the 8-car maker.

Figure 1 - depicts Train ID 402's trailing two-door leaves on railcar #2065 in front of the platform railing at the end gate.

The Terminal Supervisor is located at the entry point of the platform where trains from the mainline arrive. They have informed the ROCC that the trailing two door leaves (one full door) on railcar 2065 of Train ID 402 were opened beyond the platform and in front of the end gate railing at Downtown Largo Station. The Terminal Supervisor instructed Train Operator #1 to place Train ID 402 out-of-service, key any customer off the train as they walked through, and complete a ground walkaround. There were no injuries or damage due to this event.

Following Standard Operating Procedure (SOP) 102-1, which outlines the protocol for Removing an Employee from Service for involvement in an operational safety event, the Radio RTC dispatched a Rail Supervisor to relieve the Train Operator from duty for post-incident testing.

In adherence to the Office of the Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT) Operations Administrative Policy (OAP) 102.06, the ROCC took Train ID 402 out of revenue service for post-incident investigation. This action followed the Rail Vehicle Event Investigation Policy, ensuring a thorough examination of the incident.

Chronological Event Timeline

A review of ARS playback, i.e., phone and radio communications, revealed the following timeline:

Time	Description
14:11:11 hours	Train Operator #1: Requested confirmation if they were completing a change-off to their original Train ID 402 at Morgan Boulevard Station due to the scheduling delay. Terminal Supervisor: Responded in the negative and instructed the Train Operator to continue to Downtown Largo Station. Train Operator #1: Acknowledged with 100% repeat back. (LGO-YD/OPS)
14:12:30 hours	Train Operator #2: Notified the Terminal Supervisor that a customer opened the #9 emergency door in railcar 7373 on the non-platform side while walking through the out-of-service train on the platform. Terminal Supervisor: Acknowledged and instructed the Train Operator to complete a ground walkaround. Train Operator #2: Acknowledged with 100% repeat back. (LGO-YD/OPS)

Time	Description
14:12:49 hours to 14:15:09 hours	Terminal Supervisor: Advised RTC that the #9 emergency door in railcar 7373 was opened on the non-platform side of the train while the train was properly berthed on track 1 on the platform. (OPS 2/Phone)
14:15:11 hours	Train Operator #1: Notified the Terminal Supervisor that they verified the lunar signal at G05-02, correct rail alignment, and crossing from track 1 to track 2; when they arrived on the platform, their head would be out the cab window on the platform side (five-second rule), properly berthing the train at the 8-car marker. (LGO-YD/OPS)
14:15:22 hours to 14:16:44 hours	Terminal Supervisor: Updated RTC on the location of Train ID 408's dispatch status. (Ops 2/Phone)
14:16:37 hours	Terminal Supervisor: Advised the Train Operator that they would take the same train back out on their next trip. (LGO-YD/OPS)
14:16:47 hours	Terminal Supervisor: Answered a phone call from the Buttons RTC and advised the Train Operator that they were operating an 8-car train and opened its door short of the 8-car marker, resulting in doors opening off the platform via the radio. (OPS 3/Phone)
14:17:08 hours	Terminal Supervisor: Advised the Train Operator that they were operating an 8-car train and opened its doors off the platform. (LGO-YD/OPS)
14:17:29 hours	Terminal Supervisor: Notified RTC that Train ID 402 opened its door short of the 8-car marker, resulting in doors opening beyond the platform. (OPS 2/Phone)
14:17:45 hours	Terminal Supervisor: Instructed the Train Operator to remove the train from service. (LGO-YD/OPS)
14:18:03 hours	Terminal Supervisor: Instructed the Trian Operator to key customers off the train as they walked through the train. Train Operator #1: Acknowledged. (LGO-YD/OPS)
14:18:56 hours	Terminal Supervisor: Train Operator #1 to walk through the train to verify if it is clear of customers. (LGO-YD/OPS)
14:24:11 hours	Terminal Supervisor: Instructed the Train Operator to complete a ground walkaround on the incident train. (LGO-YD/OPS)
14:35:08 hours	Terminal Supervisor: Stated ground walkaround has been completed. (LGO-YD/OPS)
14:35:20 hours	Terminal Supervisor: Notified Rail 2 that the ground walkaround was completed. (Rail 2/Phone)

Note: Times above may vary from other systems' timelines based on clock settings.

Closed-circuit television (CCTV)

Figure 2 - depicts Train ID 402 lead car 3074 stopping approximately 30 feet from the 8-car marker at 14:16:42 hours.

Figure 3 - depicts the Train Operator placing their head out the operator's cab window before opening the train doors at 14:16:45 hours.

Figure 4 - depicts the Train Operator departing Train ID 402's lead car 3074 with the train doors open and the train not berthed at the 8-car maker.

Advanced Information Management System (AIMS)

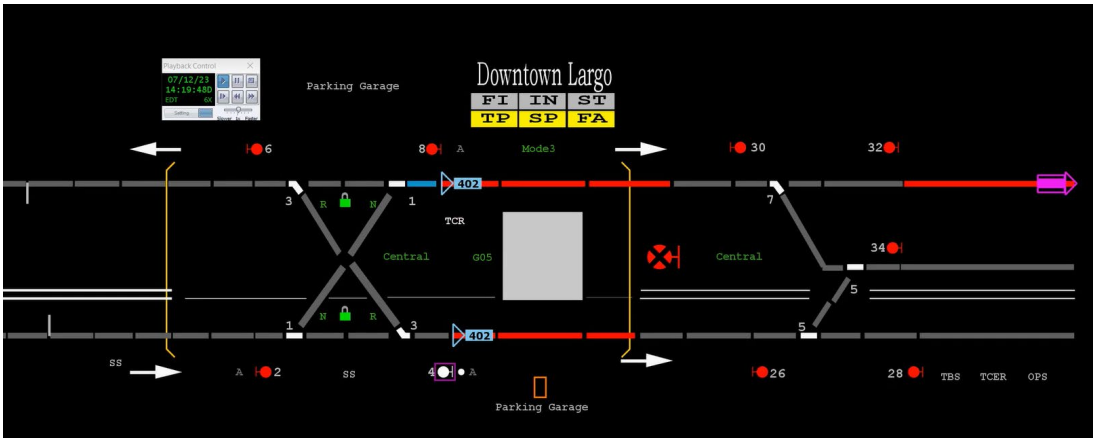


Figure 5 - AIMS depicting Train ID 402 on Track 2 slightly past the G05-08 signal.

The Office of Chief Mechanical Officer (CMOR), Incident Investigation Team (IIT)

Adopted from CMOR IIT report with minor formatting and grammatical edits:

"IIT completed the data analysis of the incident below. "Based on the data, Train ID 402 entered Downtown Largo Station, track 2, with railcar 3074 as the lead car. The Right Doors Open push button was activated, energizing the Right Door Open Trainline, and the Right doors opened on the platform side. Railcar 3074 was keyed down with doors opened. Railcar 3074 was keyed back up, and the Right Doors Close push button was activated, energizing the Right Door Close Trainline and the Right doors closed. The Door Close Check Relay (DCKR) goes high, indicating all doors were closed and locked, and railcar 3074 was keyed down. Railcar 3074 was keyed up and back down, then up again, and then taken into Largo Tail track.

No additional door operations were observed in the Vehicle Monitoring System (VMS) data. Lastly, there was no indication of stuck push buttons or failed door switches in the analysis of VMS data."

See the timeline of events below:

Time	Description of Events
14:16:10.088	Train ID 402 stopped at Largo Track #2, with Car 3074 as the lead car.
14:16:12.616	The Right Door Open Pushbutton was activated, the Right Door Open Trainlines were energized, and the Right Doors opened on the platform Side.
14:16:21.160	Car 3074 was keyed down.
14:17:11.168	Car 3074 was keyed back up.
14:17:26.716	The Right Door Closed Pushbutton was activated, and the Right Doors Closed.
14:17:34.588	DCKR signal goes HIGH, indicating all doors are closed and locked.
14:18:03.508	Car 3074 was keyed Down
14:34:17.780	Car 3074 was keyed Up
14:34:58.092	Car 3074 was keyed Down
14:36:10.272	Car 3074 was keyed Up
14:36:18.336	The Master Controller was moved to a P5 Power Mode, and the train was moved towards Largo Tail Track.

Note: Times above may vary from other systems' timelines based on clock settings.

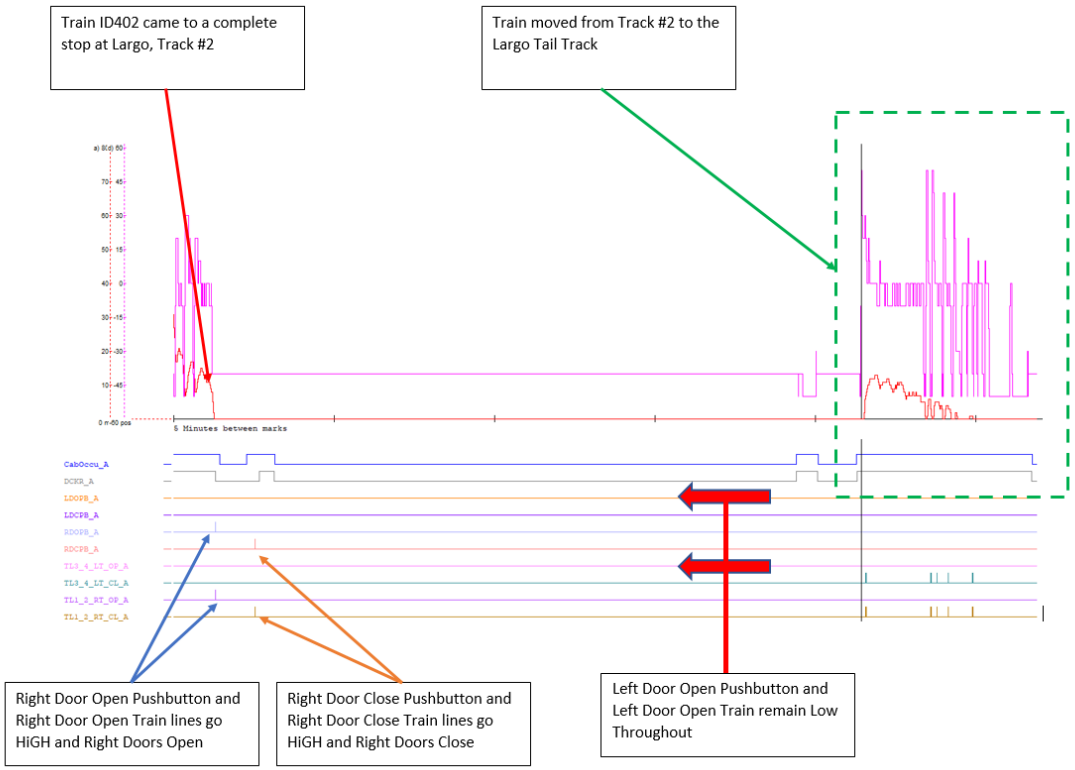


Figure 6 - Data analysis from the lead car 3074.

Office of Systems Maintenance, Office of Radio Communications (COMR)

The Office of Radio Communication (COMR) conducted a comprehensive radio check at the incident location and determined the radio communication was sufficient and that the radio checks were loud and clear.

Office of Rail Transportation (RTRA)
Adopted from RTRA report:

The Office of Rail Transportation (RTRA) conducted a comprehensive investigation and determined that several rules and procedures were violated. Based on the Train Operator's incident report, CCTV footage, the supervisors submitted a report, VMS data, and photos of the incident, it was determined that the Train Operator opened the doors outside the platform limits at Downtown Largo Station.

The Train Operator received discipline in accordance with their respective Collective Bargaining Agreement and one day of refresher Rail Training.

Interview Findings

As part of the investigation launched into the event, SAFE interviewed two people. The interviews identified the following key findings associated with this event. Findings detailed below include reported information from involved personnel and may conflict with other data sources contained in the report.

Train Operator

- The Train Operator stated they were completing their first trip toward Downtown Largo Station with an 8-car consist.
- The Train Operator stated that as they were pulling into the platform, the Terminal Supervisor requested that they re-block their train to a new ID, then moments later to re-block back to the original ID and keep the same train for their next trip out.
- The Train Operator stated they mistakenly opened the doors after stopping short of the 8-car marker and repeating back instructions to the Terminal Supervisor because they were being rushed to move the train and reverse ends.
- The Train Operator stated that they opened the window and looked out on the platform side; then they rushed to close the train doors.

Terminal Supervisor

- The Terminal Supervisor stated that Downtown Largo Station is always congested with trains arriving last.
- The Terminal Supervisor stated that a customer opened the emergency door on the off-platform side on Track 1 just before the Improper Door Operation event on Track 2.
- The Terminal Supervisor stated that they gave Train ID 402 a permissive block to the 8-car marker on track 2.
- The Terminal Supervisor stated they asked Train ID 402 to re-block the train identification to 601 because two blue lines arrived at the station. Then asked Train ID 402 to keep their ID as 402 instead of re-blocking to 601 because the train on track 1 had not completed their ground walkaround from the incident that occurred prior to Train 402's arrival.
- The Terminal Supervisor stated they called ROCC to report the incident at the same time; they instructed the Train Operator to place the train out-of-service, walk through the train to verify it was clear of customers, and complete a ground walkaround.
- The Terminal Supervisor stated that the rail line was backed up and train IDs were out of order.

Weather

On July 12, 2023, at the time of the incident, NOAA recorded the temperature as 88° F, with mostly skies, winds of 7 mph, and 41% humidity. The station is located outside on an ariel structure. Weather was not a contributing factor in this incident (Weather source: NOAA) – Location: Largo, Maryland.

Related Rules and Procedures

SOP 40 – *Procedure for Platform Berthing, Station Servicing, and Overruns*.
-6.1.1.2 Train Operators shall enter the station at a speed no greater than 40 MPH and be prepared to properly berth the train at the eight ("8") car marker. (MSRPH Rule 3.82.3)
-6.2.3.2 Ensure the train is properly berthed on the platform.
-6.3.1 Station Misalignment Short: When a train approaching the station stops short, the Rail Vehicle Operator shall adjust the train's position in Manual mode (Mode 2 Level 1) to align it with the platform at the eight (8)-car marker position.

MSRPH Operating Rule

-3.82.3 Train Operators, operating in manual mode while in revenue service, Train Operators shall enter the station at a speed no greater than 40 MPH and be prepared to properly berth the train at the “8” car marker.

Human Factors

Fatigue

Train Operator

Conditions at the time of the incident were evaluated to distinguish whether evidence of fatigue was present. Video of the incident was reviewed for behaviors suggesting fatigue. No indications of fatigue were evident from the video. The employee reported feeling fully alert at the time of the incident and reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

Train Operator

SAFE evaluated incident data for fatigue risk factors. There were no major risk factors for fatigue identified. The incident time of day (14:18 hours) does not suggest an increased risk of fatigue-related impairment. The Train Operator worked day shifts in the days leading up to the incident. The Train Operator reported a total of 7.5 hours of sleep in the last sleep period preceding the incident and was awake for 11.3 hours at the time of the incident. The off-duty period preceding the incident was 11.5 hours, which provided the opportunity for 7-8 hours of sleep. The Train Operator reported usual workday sleep durations of 6.5 hours and no issues with sleep.

Certification

Train Operator

The Train Operator first attempted certification in their position on January 13, 2023, failing the Preparation for Service section for not securing (locking) the bulkhead door of the trailing railcar during the interior inspection, exceeding the allotted time of 35 minutes by four (4) minutes, and failed to cut out the bad order doors exceeding the allotted 15 minutes by two (2) minutes. A second certification attempt was made on January 24, 2023, in the Preparation for Service section and passed by the Train Operator.

Work History

Train Operator

The Train Operator has eight (8) months of experience as a Train Operator. The Train Operator previously worked as a Bus Operator. Train Operator #1 has been a Train Operator since 01/29/2023. Train Operator #1 was last certified on 01/24/2023, receiving a passing score on their second attempt of the Preparation for Service section of the exam.

Post-Incident Toxicology Testing

WMATA's Drug and Alcohol Program determined that the Train Operator did not violate the Drug and Alcohol Policy and Testing Program 7.7.3/6.

Findings

- Train Operator #1 failed to properly berth Train ID 402 at the 8-car marker before opening the train doors.
- Train Operator #1 stated they were in a rush to reverse ends.
- Train Operator #2 had an emergency door activation before this Improper Door Operation, and radio communications were being given to both Train Operators.
- The Improper Door event was immediately observed and reported by the Terminal Supervisor.
- Train Operator #1 worked an average of 10 hours per day leading up to the event.
- Post-incident procedures were followed, including a ground walkaround and removal from service.

Immediate Mitigation to Prevent Recurrence

- Immediate Train Removal: Following the incident, the train involved was promptly taken out of service for post-incident inspection. This action ensures that any potential issues with the train's equipment or systems are identified and addressed before it returns to revenue service.

- Train Operator Review: As part of the response to the incident, the Train Operator responsible for the improper door operation was immediately removed from service for a post-incident assessment. This measure allows for a comprehensive review of the operator's performance, training, and adherence to established procedures.

Probable Cause Statement

The probable cause of the Improper Door Operation event on July 12, 2023, was that the Train Operator failed to follow established procedures for door operations. They failed to verify that they were properly berthed at the 8-car marker before pressing the door open push button.

Recommended Corrective Actions

Corrective Action Code	Description	Responsible Party	Estimated Completion Date
109888_SAFECAPS_RTRA_01	Train Operator attends refresher Train Operator Training – SOP 40 (*Procedure for Platform Berthing, Station Servicing and Overruns).*	RTRA-SRC	Completed
109888_SAFECAPS_RTRA_02	Reissue Revised (7-26-2023) SOP – 40 (*Procedure for Platform Berthing, Station Servicing, and Overruns) to RTRA personnel.*	RTRA-SRC	Completed

Appendices

Appendix A – Interview Summaries

The below narratives summarize the incident and represent the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

Train Operator

The Train Operator has been a WMATA employee for twelve years and in their current position for six months. The Train Operator is currently RWP Level 2 certified with an expiration date of 08/31/2023. The Train Operator's last certification date was 01/24/2023. The Train Operator failed their first attempt at certification in the Preparing for Service section by exceeding the allotted time and interior inspection. After retaking the Preparing for Service section, the Train Operator passed this section.

The Train Operator stated the rail line was backed up, and before operating the train, they were assisting the Terminal Supervisor at Franconia-Springfield Station with pulling out trains. The Train Operator stated they were completing their first trip on overtime toward Downtown Largo Station with an 8-car consist.

The Train Operator stated that they were late when they arrived at Morgan Boulevard and contacted the Terminal Supervisor to get permission to proceed to Downtown Largo Station. The Train Operator stated that as they were pulling into the platform, the Terminal Supervisor requested that they re-block their train to an ID, then, moments later, re-block back to the original ID and keep the same train for their next trip out.

The Train Operator stated that the communication from the Terminal Supervisors seemed like they were stressed. The Train Operator stated that they attempted to block out the Terminal Supervisors' stressful communication to not stress themselves out.

The Train Operator stated they had a legacy 8-car train and lost speed readout when approaching the 8-car marker. The Train Operator stated they mistakenly opened the door after stopping short of the 8-car marker and repeating back instructions to the Terminal Supervisor because they were being rushed to move the train and reverse ends.

The Train Operator said they opened the window and looked out on the platform side; then they rushed to close the train doors. The Train Operator stated that after they closed the train doors, they walked through the train to assist with keying customers off the train.

Terminal Supervisor

The Terminal Supervisor has been a WMATA employee for nineteen years and in their current position for seven years. The Terminal Supervisor is currently RWP Level 2 certified with an expiration date of 08/31/2023.

The Terminal Supervisor stated they were dealing with an emergency on track 1, where a customer pulled the emergency door release on the off-platform side of the station when the Train Operator of Train ID 402 was at Morgan Boulevard Station and requested permission to access the platform of Downtown Largo Station. The Terminal Supervisor stated they gave Train ID 402 permission to the platform, set the lead, and gave them a permissive block to the 8-car marker.

The Terminal Supervisor asked Train ID 402 to re-block the train identification to 601 because two blue lines arrived at the station.

The Terminal Supervisor stated they then asked Train ID 402 to keep their ID as 402 instead of re-blocking to 601 because the train on track 1 had not completed their ground walkaround from the incident that occurred before Trian 402's arrival.

The Terminal Supervisor stated that when they looked out of the terminal window to retrieve the trailing railcar number, they could not see the trailing car number. The Terminal Supervisor stated they got up from the chair, looked out of the door, and saw the train doors of the trailing railcar were open at the end gate and protected handrailing on the catwalk.

The Terminal Supervisor stated they called ROCC to report the incident and instructed the Train Operator to place the train out-of-service, walk through the train to verify it was clear of customers, and complete a ground walkaround.

The Terminal Supervisor stated that the rail line was backed up and train IDs were out of place. The Terminal Supervisor stated that Downtown Largo Station is always busy and backed up with trains entering the platform off schedule.

Appendix B – RTRA Managerial Incident Investigation Report (redacted)

Washington Metropolitan Area Transit Authority

Office of Rail Transportation: Managerial Incident Investigation Report

Incident Status: PRELIMINARY

GENERAL INCIDENT INFORMATION

Incident Type:	Improper Door Operation	Delay (Minutes):	xxx minutes
Incident Date:	Wednesday, July 12, 2023	Vehicles Involved:	(L) 2065-2064.2052-2053.3021-3020.3075-3074
Incident Time:	2:18pm	First Reported By:	Rail Operations Supervisor [redacted]
Location:	Downtown Largo Track #2		

BRIEF DESCRIPTION:

On Wednesday, July 12, 2023, at approximately 2:18pm Train Operator [redacted] entered Downtown Largo and serviced the station by way of track #2. Upon servicing the station, she was contacted by the terminal supervisor notifying her to close her doors and that she was not properly berthed on the platform. She had stopped short of the 8-car marker with the last 2 doors leaves of the trailing car off the platform. She was then given instructions by the terminal supervisor which she followed. Subsequently she was removed from service and transported for post incident testing.

Key Employees Involved & Employee Statements:

[redacted] – "Came into station was instructed to re-block then change of instructions to keep same block take train out right away. Being rushed to reverse ends over the radio needing the train to leave right away. I lost speed commands while I was communicating on radio to hurry to leave. I open the doors inches away from 8 car marker. I closed the doors immediately and keyed riders. Next did I ground walk around and waited."

Post Incident Testing & Employee History:

Operator [redacted] was transported for post incident testing by Supervisors [redacted] and [redacted].

She has been a WMATA employee since January 10, 2011, and has been a Train Operator since January 29, 2023.

Her last certification date was January 24, 2023, which he received a score of pass on her second attempt.

Office of Rail Transportation: Managerial Incident Investigation Report Page 1 of 3

Figure 7 - RTRA Managerial Incident Investigation Report - redacted page 1 of 3.

Washington Metropolitan Area Transit Authority

Office of Rail Transportation: Managerial Incident Investigation Report

SIGNIFICANT INCIDENT TIMELINE:

2:16pm- Operator [redacted] arrives at Downtown Largo by way of track #2.
2:18pm- She services the platform on the correct side but short of the 8-car marker
2:18pm- She is contacted by the terminal supervisor and notified of the improper door operation.
2:30pm- She is removed from service and transported for post incident testing.
2:32pm- ROCC Assistant Ops Manager [redacted] contacts Assistant Superintendent [redacted] to notify him of the incident.
5:35pm- Operator [redacted] arrives at Alexandria Division with supervisor [redacted] from post incident testing for initial interview with Assistant Superintendent [redacted].

SIGNIFICANT FINDINGS & PENDING ISSUES:

Under Investigation

CORRECTIVE ACTIONS:

[redacted] is being referred to ROQT for refresher on SOP 40. She will also be monitored by way of supervisor rides and spot checks.

Figure 8 - RTRA Managerial Incident Investigation Report - redacted page 2 of 3.

Washington Metropolitan Area Transit Authority

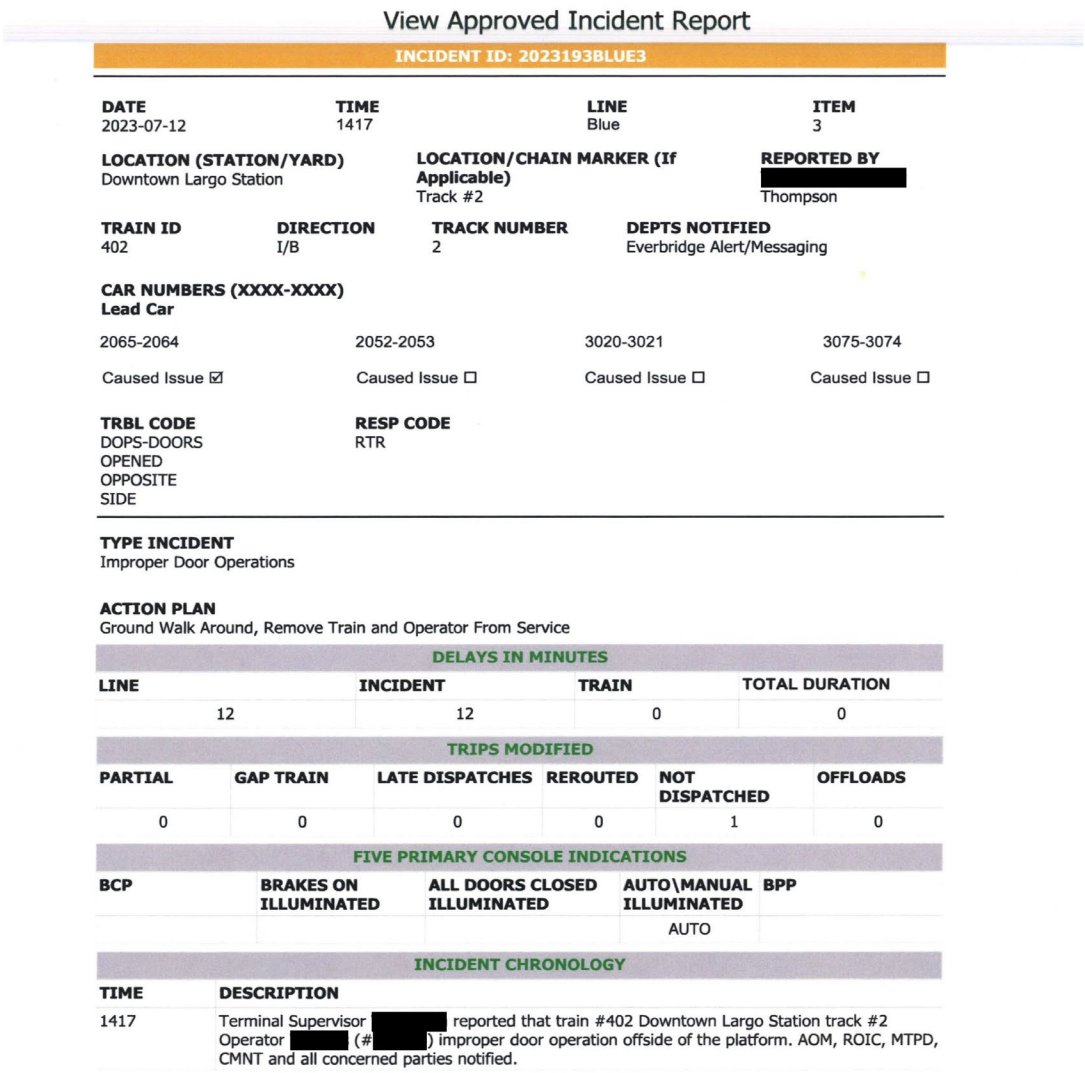
Office of Rail Transportation: Managerial Incident Investigation Report

INCIDENT PHOTOS: ATTACH ANY SIGNIFICANT PHOTOS BASED ON THE INITIAL INCIDENT INVESTIGATION.

Report Prepared by: [redacted] 7/12/2023

Report Reviewed by:

Figure 9 - RTRA Managerial Incident Investigation Report - redacted page 3 of 3.



View Approved Incident Report

INCIDENT ID: 2023193BLUE3

DATE	TIME	LINE	ITEM
2023-07-12	1417	Blue	3

LOCATION (STATION/YARD)
Downtown Largo Station

LOCATION/CHAIN MARKER (If Applicable)
Track #2

REPORTED BY
[redacted] Thompson

TRAIN ID	DIRECTION	TRACK NUMBER	DEPTS NOTIFIED
402	I/B	2	Everbridge Alert/Messaging

CAR NUMBERS (XXXX-XXXX)
Lead Car

2065-2064	2052-2053	3020-3021	3075-3074
Caused Issue ☑	Caused Issue ☐	Caused Issue ☐	Caused Issue ☐

TRBL CODE
DOPS-DOORS
OPENED
OPPOSITE
SIDE

RESP CODE
RTR

TYPE INCIDENT
Improper Door Operations

ACTION PLAN
Ground Walk Around, Remove Train and Operator From Service

DELAYS IN MINUTES

LINE	INCIDENT	TRAIN	TOTAL DURATION
12	12	0	0

TRIPS MODIFIED

PARTIAL	GAP TRAIN	LATE DISPATCHES	REROUTED	NOT DISPATCHED	OFFLOADS
0	0	0	0	1	0

FIVE PRIMARY CONSOLE INDICATIONS

BCP	BRAKES ON ILLUMINATED	ALL DOORS CLOSED ILLUMINATED	AUTO\MANUAL ILLUMINATED	BPP
			AUTO	

INCIDENT CHRONOLOGY

TIME	DESCRIPTION
1417	Terminal Supervisor [redacted] reported that train #402 Downtown Largo Station track #2 Operator [redacted] (#[redacted]) improper door operation offside of the platform. AOM, ROIC, MTPD, CMNT and all concerned parties notified.

Figure 10 - ROCC Incident Report page 1 of 2.

View Approved Incident Report

1419	Train #402 operator was instructed to perform an exterior inspection track #2 ground walk around.
1422	Train Operator [redacted] reported a clear ground walk around of the exterior of the train. RTRA Supervisor [redacted] was instructed to respond to Downtown Largo Station to escort Train Operator [redacted] for post-incident analysis.
1424	Train 403 schedule dispatch time (no dispatch).
1436	Train 404 dispatched on schedule time ending customer delay
0000	Note: Train #402 stored in the tail track at Downtown Largo Station for investigation.

MAXIMO TICKET#
8681947

REPORT PREPARED BY	NAME	CLICK TO SIGN
RADIO CONTROLLER 1	[redacted]	✓
BUTTON CONTROLLER 1	[redacted]	✓
RADIO CONTROLLER 2		
BUTTON CONTROLLER 2		

SUPERINTENDENTS OR ASSISTANTS SECTION

ADDITIONAL FOLLOW-UP CORRECTIVE ACTIONS OR REMARKS

FOLLOW-UP INFORMATION OBTAINED FROM SUPPORT DEPARTMENTS

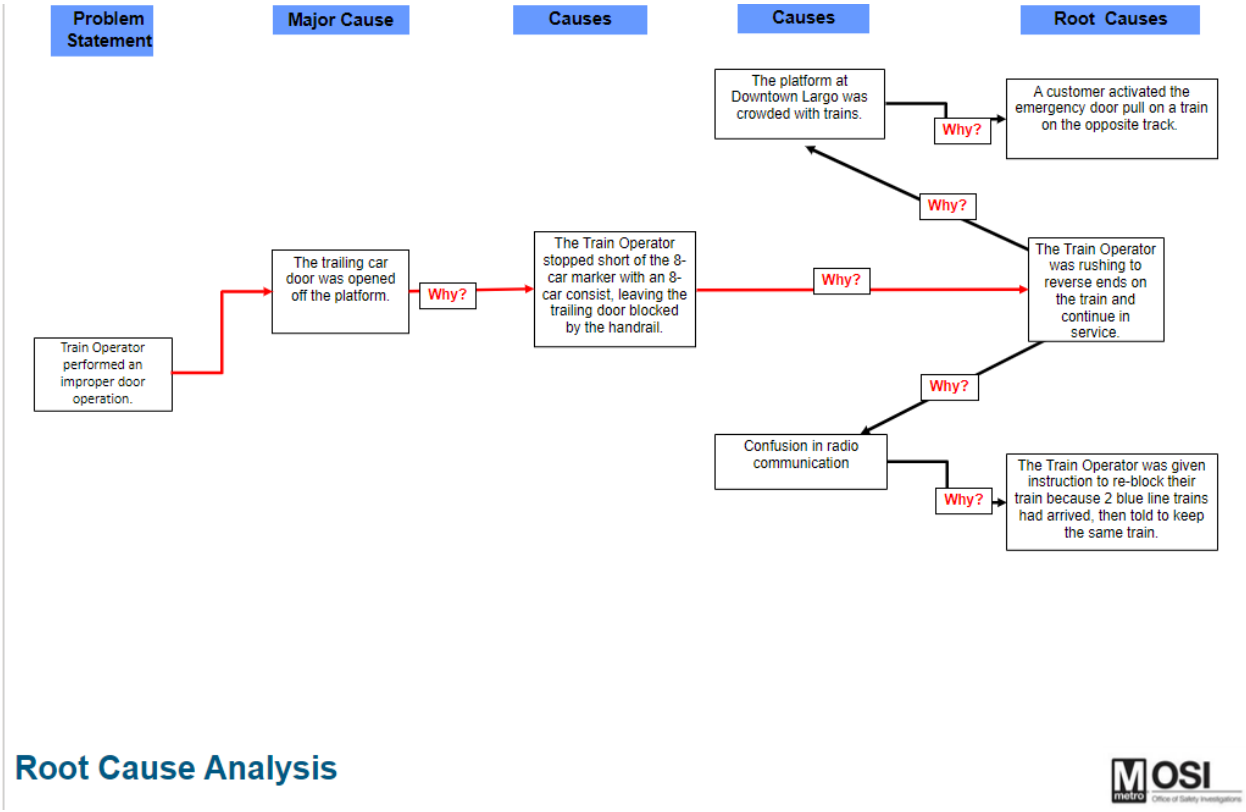
NOTIFICATIONS/PAGE GROUPS #1/CEO ☐ #2/DGM &BELOW ☐

ADDITIONAL NOTIFICATIONS MADE BY PHONE

APPROVED BY	NAME	CLICK TO SIGN
REPORT APPROVED BY SUPT. OR ASST SUPT.	[redacted]	✓

Figure 11 - ROCC Incident Report page 2 of 2.

Appendix D – Why-Tree Analysis



Washington Metropolitan Area Transit Authority
Department of Safety (SAFE)
Office of Safety Investigations (OSI)

FINAL REPORT OF INVESTIGATION A&I E23488

Date of Event:	July 14, 2023
Type of Event:	Improper Door Operation
Incident Time:	22:59 hours
Location:	Deanwood Station, track 1
Time and How received by SAFE:	23:01 hours – Mission Assurance Coordinator (MAC)
WMSC Notification Time:	July 15, 2023 – 00:50 hours
Responding Safety Officers:	WMATA: None WMSC: None Other: None
Rail Vehicle:	Train ID 913 L7324-7325, 7257-7256, 7696-7697, 7431-7430T
Injuries:	None
Damage:	None
Emergency Responders:	None
SMS I/A Number	20230715#109951MX

Deanwood Station – Improper Door Operation

July 14, 2023

Table of Contents

Abbreviations and Acronyms

ADU	Aspect Display Unit
AIMS	Advanced Information Management System
AOM	Assistant Operations Manager
ARS	Audio Recording System
CAP	Corrective Action Plan
CCTV	Closed-Circuit Television
CMOR/IIT	Office of the Chief Mechanical Officer / Incident Investigation Team
ER	Event Recorder
MAC	Mission Assurance Coordinator
MSRPH	Metrorail Safety Rules and Procedures Handbook
NOAA	National Oceanic and Atmospheric Administration
RTC	Rail Traffic Controller
RTRA	Office of Rail Transportation
ROCC	Rail Operations Control Center
ROIC	Rail Operations Information Center
SAFE	Department of Safety
SMS	Safety Measurement System
SOP	Standard Operating Procedures
VMDS	Vehicle Monitoring and Diagnostic System
WMATA	Washington Metropolitan Area Transit Authority
WMSC	Washington Metrorail Safety Commission

Executive Summary

**Note that all times listed are approximate and may contain minor variations due to differences between systems of record. **

On Friday, July 14, 2023, at 22:59 hours, Train ID 913 (L7324-7325, 7257-7256, 7696-7697, 7431-7430T) arrived at Deanwood Station on track 1, then the train doors were opened off the platform side. At 23:00 hours, the Train Operator reported to the Rail Operations Control Center (ROCC) that they opened the train doors on the opposite side of the platform and requested to perform a ground walkaround. The Radio Rail Traffic Controller (RTC) instructed the Train Operator to offload the train and complete a ground walkaround. After completing the ground walkaround, the Train Operator reported that the roadway was clear.

The Radio RTC instructed an Office of Rail Transportation (RTRA) Rail Supervisor to respond to Deanwood Station. The ROCC Assistant Operations Manager (AOM) was notified of the event. The Rail Operations Information Center (ROIC) was notified and instructed the Station Manager to assist with offloading the train.

Trains were single-tracking until a Rail Supervisor arrived and took over operating the train.

RTRA removed the Train Operator from service for post-incident toxicology testing. The train consist was removed from service for post-incident inspection.

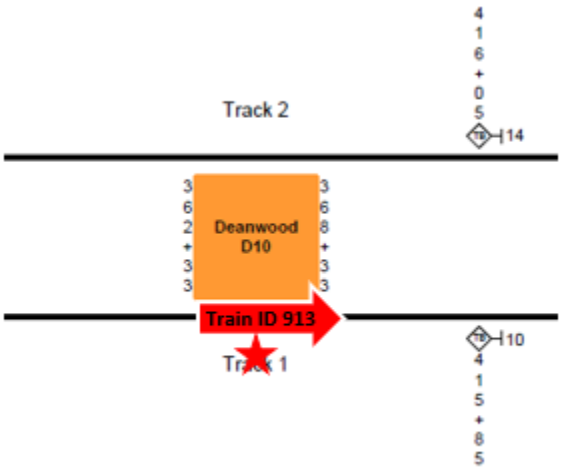
There was no damage or injuries resulting from this event. The Train Operator reported being distracted by observing law enforcement activity on the platform as they entered the station.

The probable cause of the Improper Door Operation event on July 14, 2023, at Deanwood Station, was a lack of awareness by the Train Operator when they failed to observe the platform from the cab window before depressing the doors open pushbutton.

Incident Site

Deanwood Station, track 1

Field Sketch/Schematics



The above depiction is not to scale.

Purpose and Scope

The purpose of this accident investigation and candid self-evaluation is to collect and analyze available facts, determine the probable cause(s) of the incident, identify contributing factors, and make recommendations to prevent a recurrence.

Investigative Methods

The investigative methodologies included the following:

- Site Assessment through video and document review

- Formal Interviews – SAFE interviewed one individual as part of this investigation. The interview included persons present at, during, and after the incident, those directly involved in the response process, and representatives from the Washington Metrorail Safety Commission (WMSC). SAFE interviewed the following individual:
    - Train Operator (Train ID 913)

- Documentation Review – Collection of relevant work history information and process documentation contained in WMATA systems of record. These records include:
    - Train Operator Training Records
    - Train Operator Certifications
    - Train Operator 30-Day work history review
    - Metrorail Safety Rules and Procedures Handbook (MSRPH)
    - National Oceanic and Atmospheric Administration (NOAA)
    - Rail Operations Control Center (ROCC) Incident Report
    - Maximo Data

- System Data Recording Review – Collection of information contained in Metro Data Recording Systems. This data includes:
    - Audio Recording System (ARS) playback
    - Advanced Information Management System (AIMS)
    - System Performance On-Time Summary (SPOTS)

- The Office of Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT) Vehicle Monitoring and Diagnostic System (VMDS)

Investigation

On Friday, July 14, 2023, at 22:59 hours, the Train Operator of Train ID 913 (L7324-7325, 7257-7256, 7696-7697, 7431-7430T) located at Deanwood Station, track 1 performed an improper door operation when the train doors opened off the platform side. The doors were commanded closed, and a ground walkaround was performed. There were no injuries or damage as a result of this event.

A review of the Advanced Information Management System (AIMS) revealed that Train ID 913 was located at Deanwood Station at the time of the incident.

Figure 1 - AIMS playback depicting Train ID 913 at Deanwood Station.

The Audio Recording System (ARS) playback indicated that at 23:00 hours, the Train Operator reported to ROCC that the train doors opened on the opposite side of the platform at Deanwood Station on track 1 and requested permission to perform a ground walkaround.

At 23:01 hours, ROIC contacted the Station Manager at Deanwood Station to assist with offloading the train. The Radio RTC instructed the Train Operator to offload and verify that the train was clear of customers. At 23:05 hours, the Radio RTC instructed a Rail Supervisor to report to Deanwood Station to remove the Train Operator from service.

At 23:07 hours, single tracking was established utilizing track 2. At 23:09 hours, the Train Operator was granted foul time to perform a ground walkaround.

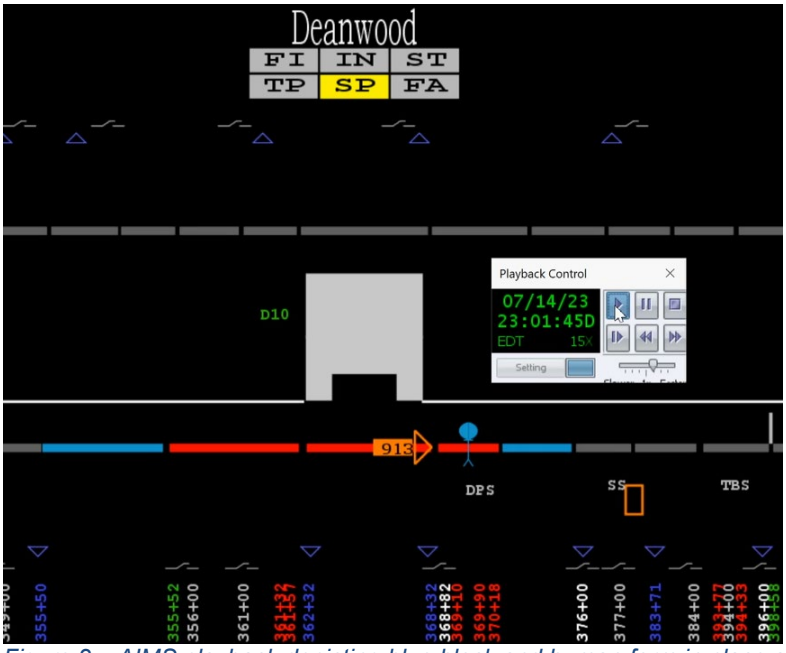


Figure 2 – AIMS playback depicting blue block and human form in place at 23:01 hours.

At 23:12 hours, Train Operator reported to the ROCC that the ground walkaround was complete, and nothing was found.

Closed Circuit Television (CCTV) revealed that at 23:23 hours, Train ID 913 arrived at Deanwood Station on track 2, and a Rail Supervisor exited the train and boarded Train ID 913 (713) located on track 1.

At 23:27 hours, Train ID 913 (713) departed Deanwood Station, and the Radio RTC announced that train service was normal.

The Office of the Chief Mechanical Officer, Incident Investigation Team (CMOR/IIT) performed an inspection and provided the following analysis:

“Train ID 913 stopped at the 8-car marker, the right door open pushbutton was activated, the Aspect Display Unit (ADU) door enable was started, the right door open pushbutton was activated, and the right-side doors opened opposite the platform side.

The right door close pushbutton was activated, then the right-side doors were closed, and all doors closed, and the locked signal went high.

The left door open pushbutton was activated, and the left doors opened on the platform side. The left door close pushbutton was started, and the left door close train line went high, closing the left side doors. All doors were closed, and the locked signal went high, indicating all doors were closed and locked.

The Lead Car 7324 was then keyed down.”

At 23:35 hours, Train ID 913 (713) arrived at New Carrollton Station and was dispatched to New Carrollton Yard for storage.

Chronological Event Timeline

A review of ARS playback, i.e., phone and radio communications, revealed the following timeline:

Time	Description
23:10:00 hours	Train ID 913: Arrived at the Deanwood Station. [AIMS]
23:00:12 hours	Train ID 913: Reported to ROCC that the doors opened on the wrong side at Deanwood Station on track 1 and requested permission to perform a ground walkaround. [Radio Ops 2]
23:00:57 hours	ROCC Button RTC: Reported to the AOM that Train ID 913 opened doors on the wrong side at Deanwood Station and that the Train Operator had requested to perform a track inspection around the train [Phone Ops 2]
23:01:45 hours	ROCC Radio RTC: Requested that Train ID Operator 913 perform a radio check. [Radio Ops 2]
23:01:51 hours	ROCC Button RTC: Contacted ROIC and requested the Station Manager at Deanwood Station assist with offloading the train. [Phone Ops 2]
23:02:15 hour	ROCC Button RTC: Contacted New Carrollton Terminal and requested control of the Interlocking Board. They further instructed that they travel to Deanwood Station. [Phone Ops 2]
23:02:44 hours	MAC: Notified the On-Call Director about the event at Deanwood Station. [Phone MAC]
23:02:48 hours	ROCC Radio RTC: Requested that Train ID 913 Operator confirm the improper door operation and maintain radio contact with the ROCC [Radio Ops 2]
23:02:58 hours	ROCC Radio RTC: Instructed Train ID 913 Operator to offload passengers and verify that the train was clear of customers. Train ID 913: Acknowledged and repeated. [Radio Ops 2]
23:04:04 hours	ROCC Radio RTC: Requested that Rail Supervisor #1 provide their location. Rail Supervisor #1: Responded, but the location was inaudible. ROCC Radio RTC: Instructed Rail Supervisor #1 to board the train to assist with the Deanwood event [Radio Ops 2]
23:04:47 hours	ROCC Radio RTC: Requested that Train ID 913 Operator confirm that the train was cleared of all passengers. [Radio Ops 2]
23:05:02 hours	ROCC Radio RTC: Received confirmation that Rail Supervisor #2 was en route to Deanwood Station [Radio Ops 2]
23:06:40 hours	ROCC Radio RTC: Requested that Train Operator verify that the train was cleared of all passengers. [Radio Ops 2]
23:07:43 hours	ROCC Button RTC: Informed an unknown party that single-tracking was established. [Phone Ops 2]
23:09:30 hours	ROCC Radio RTC: Train ID 913 Operator granted foul time permission to perform an inspection around the train at track 1 in the Deanwood Metro Station. Train ID 913: Repeated the instructions provided by the ROCC [Radio Ops 2]
23:09:52 hours	Rail Supervisor #1: Inquired if they were still needed to respond to Deanwood Station. ROCC Radio RTC: Instructed Rail Supervisor #1 to stand by and advised that two other supervisors were en route to Deanwood Station. Rail Supervisor: Acknowledged. [Radio Ops 2]
23:10:00 hours	*Blue block with human form activated.* (AIMS)
23:10:14 hours	Station Manager: Performed a radio check. [Radio Ops 2]

Time	Description
23:10:19 hours	Train ID 913: Inquired if they had foul time. ROCC Radio RTC: Confirmed that the Train Operator had foul time to inspect track 1 at Deanwood Station. Train ID 913: Acknowledged and repeated. [Radio Ops 2]
23:10:48 hours	ROCC Radio RTC: Instructed that Rail Supervisor #1 to stand by at Stadium-Armory Station. Rail Supervisor #1: Acknowledged and repeated [Radio Ops 2]
23:12:26 hours	ROCC Radio RTC: Announced single tracking operations at Deanwood Station. [Radio Ops 2]
23:12:42 hours	Train ID 913: Reported that the inspection on track 1 was complete and that nothing was found. [Radio Ops 2]
23:21:51 hours	Train ID 913: Reported that the inspection on track 1 was complete and that nothing was found. ROCC Radio RTC: Acknowledged that the inspection was complete. [Radio Ops 2]
23:23:51 hours	Train ID 913 arrived at Deanwood Station on track 2, and a Rail Supervisor exited the train. [CCTV]
23:24:08 hours	ROCC Radio RTC: Requested that Rail Supervisor #2 and Rail Supervisor #3 advised when they were at Deanwood Station. Rail Supervisor #2: Acknowledged. ROCC Radio RTC: Instructed Rail Supervisor #2 to stay with the train and Rail Supervisor #3 to remain with the Train Operator. Rail Supervisor #2: Acknowledged and repeated. [Radio Ops 2]
23:25:29 hours	Rail Supervisor #3: Reported at Deanwood Station with Rail Supervisor #2. ROCC Radio RTC: Instructed Rail Supervisor #3 to remove the Train Operator from service and Rail Supervisor #2 to take over operating the train. Requested that Rail Supervisor #2 advised when they were ready to move the train. Rail Supervisor #2: Advised that they were ready to key up and move the train to New Carrollton Station. ROCC Radio RTC: Acknowledged and repeated. [Radio Ops 2]
23:27:57 hours	Train ID 913 (713) departed Deanwood Station. [SPOTS]
23:27:35 hours	ROCC Radio RTC: Announced that normal train service resumed. [Radio Ops 2]
23:35:59 hours	Train ID 913 (713) arrived at New Carrollton Station and was dispatched to New Carrollton Yard. [SPOTS]

Note: Times above may vary from other systems' timelines based on clock settings.

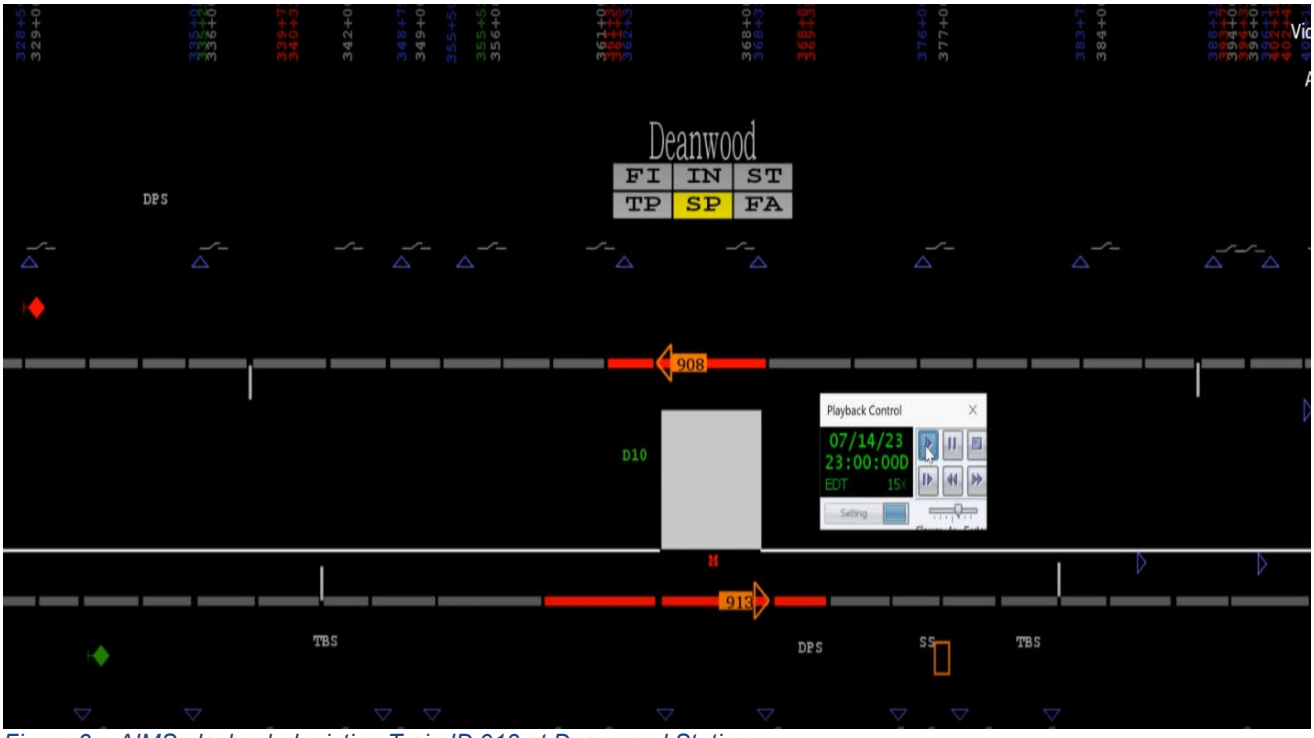


Figure 3 – AIMS playback depicting Train ID 913 at Deanwood Station.

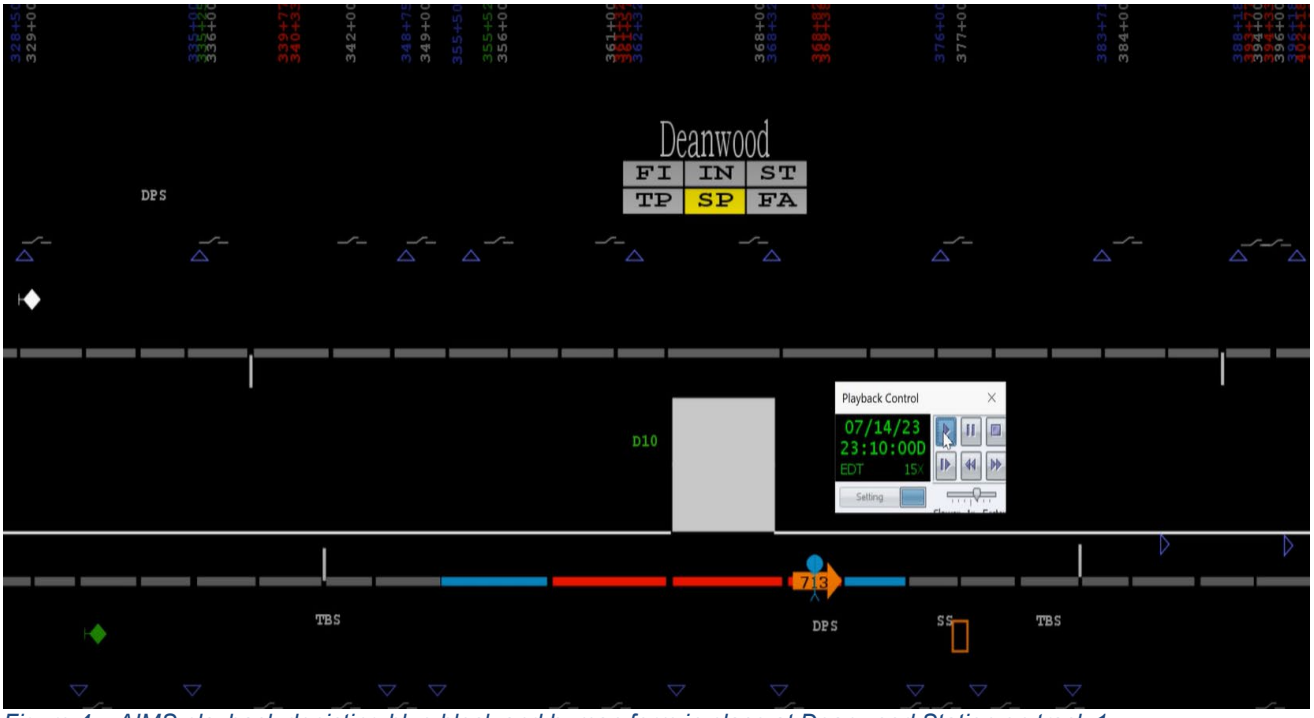


Figure 4 – AIMS playback depicting blue block and human form in place at Deanwood Station on track 1.

The Office of Chief Mechanical Officer (CMOR) / Vehicle Monitoring and Diagnostic System (VMDS)

Adopted from the CMOR/IIT report with minor edits for formatting and grammar:

“Train ID 913, Cars L7324-25x7257-56x7696-97x7431-30T, was reported for an improper door operation.

IIT has completed download and analysis of data retrieved from Lead Car 7324.

Based on VMDS and ER data, Train ID 913, came to a complete stop at the 8-Car marker. The Right Door open pushbutton was activated and the ADU Door Enable was activated. Right door open pushbutton was activated and the Right doors opened opposite of the platform side. The Right Door Close pushbutton was activated, Right Doors were closed and All Doors closed and locked signal goes HIGH.

The Left Door Open pushbutton was activated and left doors opened on the platform side. The Left Door Close pushbutton was activated and Left Door Close trainline goes HIGH, closing the Left side doors. All Doors closed and locked signal goes HIGH, indicating all doors are closed and locked.

The Lead Car 7324 was then keyed down.

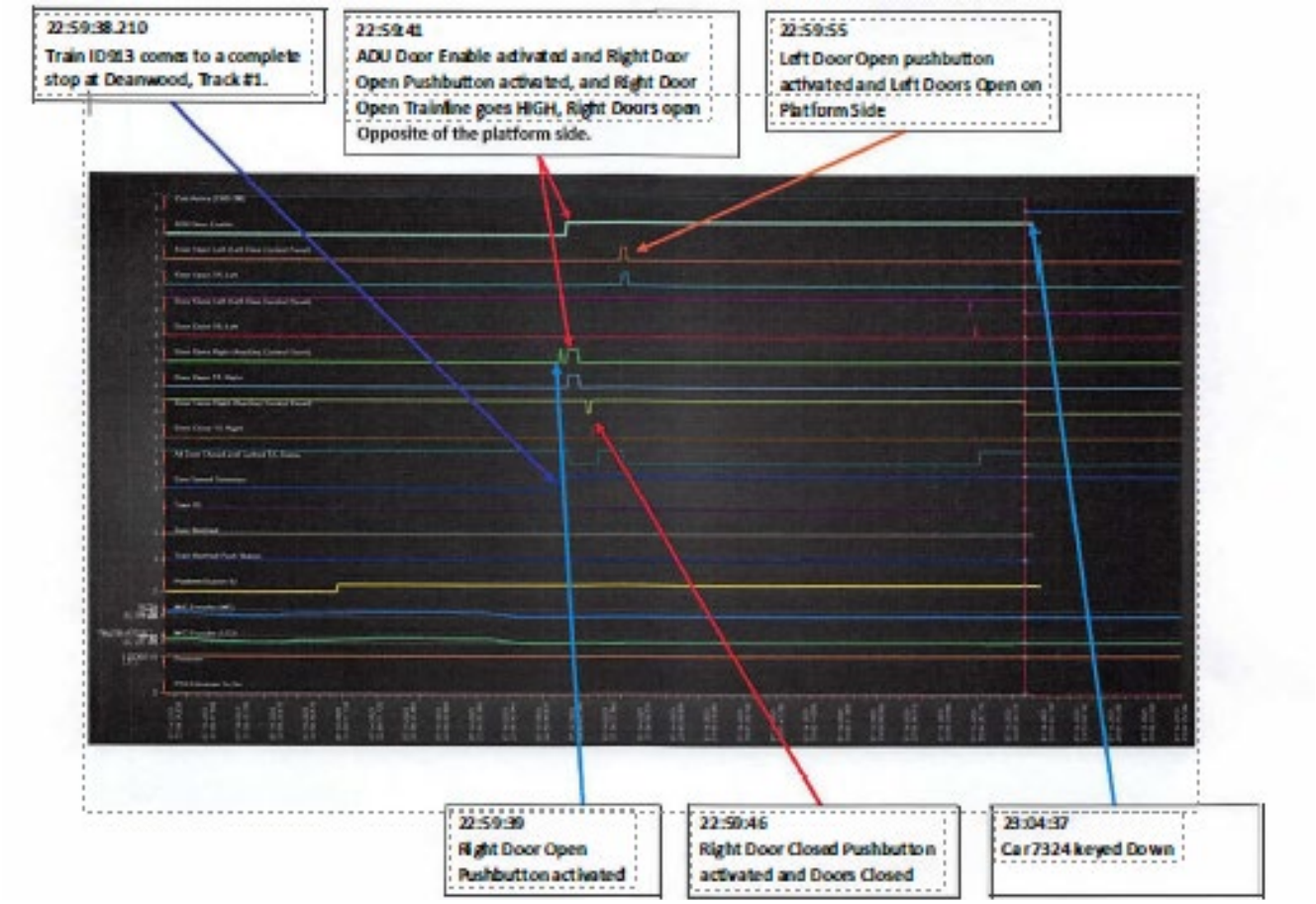
Based on the VMDS and Event Recorder (ER) data, there was no fault with the train that contributed to the cause of this incident. The train performed as commanded.”

Table 1 – Summary of Events

Time	Description of Events
22:59:38.210	Train ID913 came to a complete stop 4 ft. before the 8-Car marker at Deanwood, Track #1.
22:59:39.010	Right Door open pushbutton signal goes High
22:59:41.880	ADU Door Enable activated on ADU.
22:59:42.000	Right Door open pushbutton and Right Door Open Trainline signal goes High, Opening Right Side Doors opposite of the platform side.
22:59:46.030	Right Door Close pushbutton activated, and Right Door Close Trainline goes HIGH and Right Doors Close.
22:59:50.870	All Doors Closed and Locked T/L goes High, indicating all doors closed and locked.
22:59:55.600	Door Open Left pushbutton activated and Door Open Left Trainline goes HIGH. Left Doors open on the platform.
23:04:23.200	Door Close Left pushbutton activated and Door Close Left Trainline goes HIGH, closing left side doors.
23:04:28.010	All Doors Closed and Locked T/L goes High, indicating all doors closed and locked.
23:04:36.990	Car 7324 is keyed Down

Note: Times above may vary from other systems' timelines based on clock settings.

Graph 1 – VMS Graph



Office of Systems Maintenance, Office of Radio Communications (COMR)

COMR conducted comprehensive radio checks (TX/RX) at Deanwood Station on tracks one and two. No trouble was found.

Office of Rail Transportation (RTRA)
Adopted from RTRA report:

On July 14, 2023, at 22:59 hours, Train ID 913 entered the Deanwood Station on track 1. At 23:20 hours the ROCC notified Unit 39 that the Train Operator had opened the doors on the opposite side of the platform while attempting to service the station. Unit 39 contacted Unit 45 who was with the Train Operator and coordinated to meet to escort the Operator to post incident examination. At 00:21 hours, Unit 39 the Train Operator arrived at L'Enfant Plaza WMATA Office.

Interview Findings
As part of the investigation launched into the event, SAFE interviewed one person. The interview identified the following key findings associated with this event. Findings detailed below include reported information from involved personnel and may conflict with other data sources contained in the report.

Train Operator

- The Train Operator stated that they observed law enforcement activity as they entered the platform and became distracted.
- The Train Operator stated that they inadvertently opened the doors on the opposite side of the platform.
- The Train Operator stated that they immediately closed the doors and notified the ROCC once they realized their mistake.
- The Train Operator stated that they requested permission to inspect the roadway to verify that no customers had exited the train.

Weather

At the time of the incident, NOAA recorded the temperature at 80° F and partly sunny. Weather was not a contributing factor in this incident (Weather source: NOAA – Location: Washington, DC).

Related Rules and Procedures

- MSRPH SOP # 40 – Door Operations

Human Factors

Fatigue

Signs and Symptoms of Fatigue

Conditions were evaluated at the time of the incident to distinguish whether evidence of fatigue was present. The Train Operator reported feeling fully alert at the time of the incident. The Train Operator reported experiencing any symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

The incident data was evaluated for fatigue risk factors for the Train Operator. Risk factors for fatigue were not present for the Train Operator. Since fatigue evidence and risk factors were absent, the biomathematical fatigue modeling application (SAFTE-FAST Web SFC) was not applied.

Post-Incident Toxicology Testing

WMATA's Drug and Alcohol Program determined that the Train Operator complied with and was not in violation of the Drug and Alcohol Policy and Testing Program 7.7.3/7.

Findings

- The Train Operator acknowledged that they pressed the right-side door open pushbutton without verifying they were on the platform side.
- The Train Operator reported being distracted before the event when they observed law enforcement activity at Deanwood Station.

Immediate Mitigation to Prevent Recurrence

- A Rail Supervisor took over operating the train.
- The Train Operator was removed from service for post-incident testing.

Probable Cause Statement

The probable cause of the Improper Door Operation event on July 14, 2023, at Deanwood Station, was a lack of awareness by the Train Operator when they failed to observe the platform from the cab window before depressing the doors open pushbutton.

Recommended Corrective Actions

Corrective Action Code	Description	Responsible Party	Estimated Completion Date
109951_SAFECAPS_RTRA_001	Train Operator to attend Re-Instruction Training with an emphasis on SOP #40 - Door Operations.	RTRA	Completed

Appendices

Appendix A – Interview Summary

The below narratives summarize the incident and represent the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

Train Operator

The Train Operator is a WMATA employee with one year of service and experience as a Train Operator. The Train Operator holds a Roadway Worker Protection (RWP) Level 2 certification that expires in August 2023 and was certified as a Train Operator in December 2022.

During the formal interview, the Train Operator stated they were operating Train ID 913 on the event date and arrived at Deanwood Station.

The Train Operator stated that they observed law enforcement activity and became distracted.

The Train Operator stated they inadvertently opened the train doors on the opposite side of the platform. Once they realized the mistake, they immediately closed the doors and notified the ROCC.

The Train Operator stated that they requested permission to perform a ground walkaround.

The Train Operator acknowledged that they did not follow the procedures.

TRAIN OPERATOR AND ROAD SUPERVISOR
JOB TASK PROFICIENCY EVALUATION

Name: [redacted] Emp.No: [redacted] Division: Training Date: December 6, 2022

Reason for Certification: *Please place a check in an area below.*

☑ Certification: Student ☐ Pre-certification: Student ☐ Division Request ☐ Re-Certification ☐ Return to Duty ☐ Other

Exam Administered	Score	Date Taken
MSRPH version #:	86 %	11.10.2022
TVOIM/TOIM	84 %	11.10.2022
Supervisor Combination	N/A %	N/A
Practical attempt #: 1st	GL- 1	12.6.2022

Equipment *(current/working condition)*	Yes	No
MSRPH		✓
Perm/Temp/Special Orders		✓
Troubleshooting Guide	✓	
Flashlight		✓
Safety Vest	✓	
Footwear	✓	
Identification (One Badge, RWP)	✓	

Comments

Needs to WORK on Communication particularly with Singing other and understanding that regardless of rank or title, instructions have to be Safe if ever they are not you are to exercise rule S. 1.

Needs Reflective vest Flashlight.

[redacted] Date: 12/6/2022 12/6/2022

RTRA-905-01-00 TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION Page 1

Document 1 – Train Operator's Certification Evaluation, Page 1 of 2

[redacted]

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION (continuation sheet) Emp No [redacted] Date: December 6, 2022

CATEGORIES / SUBCATEGORIES	QUALITY LEVEL	REMARKS (*Remarks are required for a quality level score of 2 or 3*)
I. Preparation for Service	QL-1	Cars Used: 7472-7473 X 7461-7460 X 7234-7235 X 7221-7220
1. Exterior Inspection	1	#7460 BPR, 7473 BCO [illegible]
2. Interior Inspection - Trailing Cab	1	#7472 missing paddle
3. Interior Inspection - Each Car	1	#7473 room panel open
4. Interior Inspection – Oper. Cab	1	#7460 Emergency Evacuation Board missing
5. Rolling Test / Rolling Brake Test	1	
		Time Allotted: 35:00 / Actual Time: 00:30
II. Mainline Operation	QL-1	
6. Communications	1	
7. Door Oper. & Station Stopping	1	
8. Use of Horn	1	
9. Speed Adherence/Manual Oper.	1	
10. Turn Back Moves	1	Location: [illegible] Time Allotted: 02:00 / Actual Time: 02:00
11. Manual Route Selection	1	Location: [illegible] Terminal
12. EV Shutoff	1	Time Allotted: 00:30 (1:00) / Actual Time: 01:50
III. Yard Operation	QL-1	
13. Communications	1	
14. Yard Movements	1	
15. Coupling	1	Time Allotted: 08:00 (12) / Actual Time: 05:45 Cars Used: 7221 + 7235
16. Uncoupling	1	Time Allotted: 05:00 (7.5) / Actual Time: 04:20 Cars Used: < >
17. Isolation (Self-Recovery)	1	Time Allotted: 15:00 (22.5) / Actual Time: 2:12 Cars Used:
18. Manual Switch Operation	1	#191
IV. Miscellaneous	QL-1	
19. Recovery Train Operation	1	Time Allotted: 12:00 (18) / Actual Time: 10:11 Cars Used: 7460 + 7234
20. Troubleshooting	1	
1) [illegible] no fault B.E [illegible]		
2) Door control c/b tripped no fault 1:10		

RTRA-906-01-00 TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION Page 2

Document 2 - Train Operator's Certification Evaluation, Page 2 of 2

Appendix C – Work Orders

Page 1 of 2
MX76PROD

Washington Metropolitan Area Transit Authority
Maintenance and Material Management System
Work Order Details

Work Order #: 18006076
Type: CM

Status: CLOSE
07/26/2023 21:52

Work Description: Operator reported opening the doors on the wrong side of the platform, 12/26, D10, RTR, DOPS, 913
Job Plan Description:

Work Information

Asset:	R7324	7324, RAIL CAR, KAWASAKI, 7000 AC, A CAR	**Owning Office:**	CMNT-CMNT-CMNT	**Parent:**
Asset Tag:	R7324		**Maintenance Office:**	CMNT-DULL-INSP	**Create Date:** 07/15/2023 00:23
Asset S/N:	7324		**Labor Group:**	CMNT	**Actual Start:** 07/15/2023 00:26
Location:	2280	N99, DULLES YARD	**Crew:**		**Actual Comp:** 07/15/2023 22:06
Work Location:	1230	D99, NEW CARROLLTON YARD	**Lead:**		**Item:** K18050001
Failure Class:	CMNT014	DOOR	**GL Account:**	WMATA-02-33395-50499160-041-**********-*****-OPR**	
Problem Code:	1650	DOOR OPENED WRONG SIDE	**Supervisor:**	[redacted]	**Target Start:**
Requested By:			**Requestor Phone:**	[redacted]	**Target Comp:**
Chain Mark Start:			**Chain Mark End:**		**Scheduled Start:**
Create-Mileage:	464567.0		**Complete-Mileage:**	464714.0	

Task IDs

Task ID							
10	SEE DETAILS AT YARD UNABLE TO VERIFY THE REPORTED FAILURE DOWNLOADED VMDS MAIN , ATC AND ER LOGS .						
Component:	000-300-M00 SUBSYSTEM; DOOR CONTROL (SIDE DOOR); 2K/3K/6K/7K	**Work Accomp:** DOWNLOADED	**Reason:** INCIDENT//ACCIDENT	**Status:** CLOSE	**Position:**	**Warranty?:** N	
20	IIT RECOMMENDATIONS:-Inspect :Left/Right Door Open and close switches						
Component:	000-300-M00 SUBSYSTEM; DOOR CONTROL (SIDE DOOR); 2K/3K/6K/7K	**Work Accomp:** INSPECTED	**Reason:** INCIDENT//ACCIDENT	**Status:** CLOSE	**Position:**	**Warranty?:** N	
30	IIT RECOMMENDATIONS: -Perform functional test to ensure Left & Right Door Open and Close switches function properly and move freely and that they are not binding or sticking during operation. RUN A GOOD MAINTENANCE TEST , WITH NO FAILURE						
Component:	000-300-M00 SUBSYSTEM; DOOR CONTROL (SIDE DOOR); 2K/3K/6K/7K	**Work Accomp:** INSPECTED	**Reason:** INCIDENT//ACCIDENT	**Status:** CLOSE	**Position:**	**Warranty?:** N	
40	IIT RECOMMENDATIONS: PERFORM SUCCESSFUL DI SUCCESSFUL DI						
Component:	000-300-M00 SUBSYSTEM; DOOR CONTROL (SIDE DOOR); 2K/3K/6K/7K	**Work Accomp:** INSPECTED	**Reason:** INCIDENT//ACCIDENT	**Status:** CLOSE	**Position:**	**Warranty?:** N	

WT_plust_woprint.rptdesign 09/12/2023 16:48

Figure 5 - Maximo Work Order demonstrating no trouble found. Page 1 of 2

Washington Metropolitan Area Transit Authority
Maintenance and Material Management System
Work Order Details

Work Order #: 18006076
Type: CM

Status: CLOSE
07/26/2023 21:52

Work Description: Operator reported opening the doors on the wrong side of the platform, 12/26, D10, RTR, DOPS, 913
Job Plan Description:

Actual Labor

Task ID	Labor	Start Date	End Date	Start Time	End Time	Approved?	Regular Hours	Premium Hours	Line Cost
10	[redacted]	07/15/2023	07/15/2023	04:00	05:00	Y	01:00	00:00	$49.00
20	[redacted]	07/15/2023	07/15/2023	19:30	20:30	Y	01:00	00:00	$49.00
30	[redacted]	07/15/2023	07/15/2023	20:30	21:30	Y	01:00	00:00	$49.00
40	[redacted]	07/15/2023	07/15/2023	21:30	22:30	Y	01:00	00:00	$49.00
						Total Actual Hour/Labor:	04:00	00:00	$196.01

Related Incidents

Ticket	Description	Class	Status	Relationship
8682604	Operator reported opening the doors on the wrong side of the platform, 12/26, D10, RTR, DOPS, 913	SR	CLOSED	ORIGINATOR

Failure Reporting

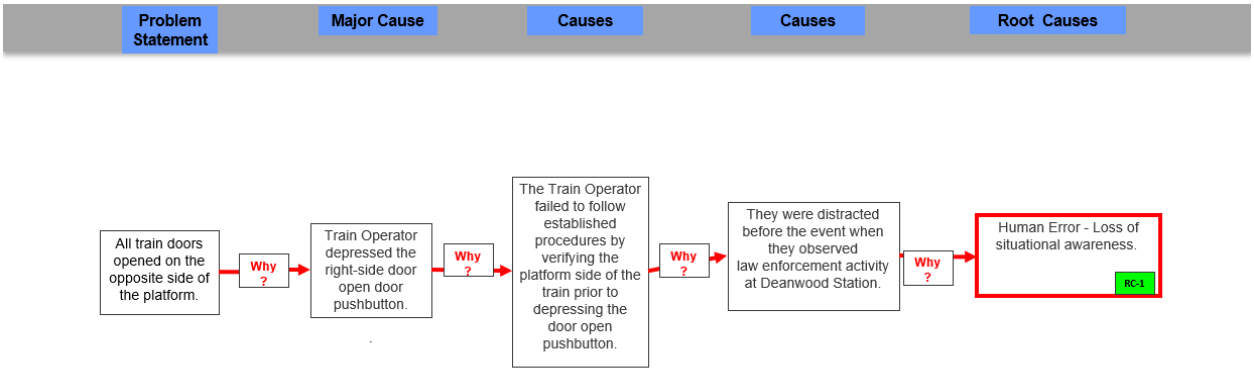
Cause		Remedy		Supervisor	Remark Date
2462	NO DEFECT; INCIDENT RELATED CONSIST	3192	TESTED / INSPECTED	[redacted]	07/15/2023

Remarks: FOLLOWED IIT RECOMM; ALL COMPLIED NO ISSUE FOUND. GOOD DI GOOD FOR SERVICE.

WT_plust_woprint.rptdesign 09/12/2023 16:48

Figure 6 - Maximo Work Order demonstrating no trouble found. Page 2 of 2

Appendix D – Root Cause Analysis



5 **Root Cause Analysis** WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

Washington Metropolitan Area Transit Authority
Department of Safety (SAFE)
Office of Safety Investigations (OSI)

FINAL REPORT OF INVESTIGATION A&I E23592

Date of Event:	August 23, 2023
Type of Event:	Improper Door Operation
Incident Time:	18:52 hours
Location:	Smithsonian Station, track 1
Time and How received by SAFE:	18:57 hours/Notification/MAC
WMSC Notification Time:	19:33 hours
Responding Safety Officers:	None
Rail Vehicle:	Train ID 603 L7406/07x7209/08x7218/19x7345/44T
Injuries:	None
Damage:	None
Emergency Responders:	None
SMS I/A Incident Number:	20230823#110880MX

Smithsonian Station – Improper Door Operation

August 23, 2023

Table of Contents

Abbreviations and Acronyms

AIMS	Advanced Information Management System
AOM	Assistant Operations Manager
CCTV	Closed-Circuit Television
CMNT	Office of Car Maintenance
CMOR	Office of the Chief Mechanical Officer
IIT	Incident Investigation Team
MOR	Metrorail Operating Rulebook
NOAA	National Oceanic and Atmospheric Administration
OAP	Operations Administrative Policy
ROCC	Rail Operations Control Center
ROIC	Rail Operations Information Center
RTC	Rail Traffic Controller
RTRA	Office of Rail Transportation
RWP	Roadway Worker Protection
SAFE	Department of Safety
SMS	Safety Measurement System
VMDS	Vehicle Monitoring and Diagnostic System
WMATA	Washington Metropolitan Area Transit Authority
WMSC	Washington Metrorail Safety Commission

Executive Summary

**Note that all times listed are approximate and may contain minor variations due to differences between systems of record. **

On Wednesday, August 23, 2023, at 18:52 hours, Train ID 603 (L7406/07X7209/08X7218/19X7345/44T) was located at the Smithsonian Station on track 1, when the right-side doors were opened on the platform side, and seven seconds later the left-side doors were opened on the non-platform side. The left-side doors were closed, then the right-side doors on the platform side were closed and re-opened seconds later, then the train was keyed down.

At 18:54 hours, the Train Operator alighted the train, contacted the Rail Operations Control Center (ROCC) via cell phone and reported that they had opened the train doors on the non-platform side. The Button Rail Traffic Controller (RTC) confirmed the information and instructed the Train Operator to verify that the train was clear of customers and that no one had fallen onto the roadway. At 19:04 hours, the roadway was confirmed clear.

The Train Operator reported that they lost situational awareness and were listening to the train's automated announcements prior to going to the wrong side of the cab and opened the doors off of the platform. They immediately realized their mistake and then panicked, secured the train and alighted to report the event via cell phone instead of using the train radio.

The Radio RTC contacted and instructed an Office of Rail Transportation (RTRA) Rail Supervisor to respond to Smithsonian Station. The Button RTC notified the Assistant Operations Manager (AOM) of the event. The Button RTC notified the Rail Operations Information Center (ROIC), and the Station Manager was instructed to assist with offloading the train.

In adherence to Standard Operating Procedure 102-1, which outlines the protocol for Removing an Employee from Service for involvement in an operational safety event, the Radio RTC dispatched a Rail Supervisor to relieve the Train Operator from duty for post-incident testing.

In accordance with the Office of the Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT) Operations Administrative Policy (OAP) 102.06, the Rail Operations Control Center (ROCC) promptly initiated the removal of Train ID 603 from revenue service for post-incident investigative measures. This action adhered to the Rail Vehicle Event Investigation Policy, ensuring a comprehensive examination of the incident.

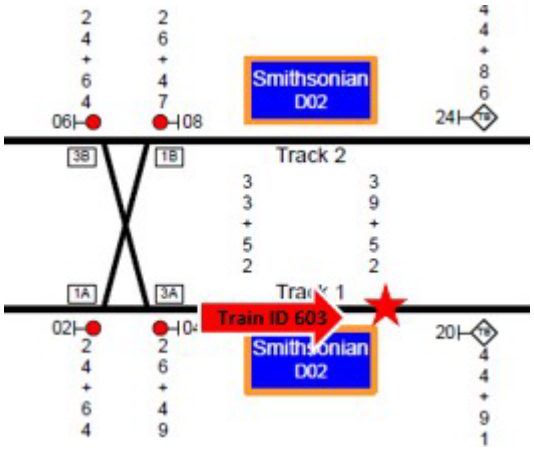
There was no damage or injuries resulting from this event.

The probable cause of the Improper Door Operation event on August 23, 2023, at Smithsonian Station, was the loss of situational awareness by the Train Operator when they became focused on the automated train announcements.

Incident Site

Smithsonian Station, track 1

Field Sketch/Schematics



The above depiction is not to scale.

Purpose and Scope

The purpose of this accident investigation and candid self-evaluation is to collect and analyze available facts, determine the probable cause(s) of the incident, identify contributing factors, and make recommendations to prevent a recurrence.

Investigative Methods

The investigative methodologies included the following:

- Physical Site Assessment through video and document review

- Formal Interviews – SAFE interviewed one individual as part of this investigation. The interview included persons present at, during, and after the incident, those directly involved in the response process, and representatives from the Washington Metrorail Safety Commission (WMSC). SAFE interviewed the following individual:
    - Train Operator (Train ID 603)

- Informal Interviews – Collected through conversations with individuals during the investigation to provide background and supporting information. Written statements were reviewed from personnel present during the event.

- Documentation Review – Collection of relevant work history information and process documentation contained in WMATA systems of record. These records include:
    - Train Operator Training Records
    - Train Operator Certifications
    - Train Operator 30-Day work history review
    - Metrorail Operating Rulebook (MOR)
    - National Oceanic and Atmospheric Administration (NOAA)
    - Rail Operations Control Center (ROCC) Incident Report
    - Maximo Data

- System Data Recording Review – Collection of information contained in Metro Data Recording Systems. This data includes:
    - Advanced Information System (AIMS) Playback
    - Audio Recording System (ARS) Playback [Radio and Landline Communications]
    - The Office of Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT) Vehicle Monitoring and Diagnostic System (VMDS)
    - Closed-Circuit Television (CCTV)

Investigation

On Wednesday, August 23, 2023, at 18:52 hours, Train ID 603 (L7406/07X7209/08X7218/19X7345/44T) was located at the Smithsonian Station on track 1, when the right-side doors were opened on the platform side, and seven seconds later the left-side doors were opened on the non-platform side. The left-side doors remained open on the non-platform side for eighteen seconds before they were closed, then the right-side doors on the platform side were closed and re-opened seconds later. Then the train was keyed down.

Image 1 – Train ID 603 located at Smithsonian Station with the doors open on the non-platform side.

The Closed-Circuit Television (CCTV) revealed that at 18:53 hours, the Train Operator exited the train with a bag, removed a cell phone from the bag, and made a phone call.

The Audio Recording System (ARS) revealed that at 18:54 hours, the Train Operator contacted the ROCC at the Ops 3 desk and reported that the train doors opened on the non-platform side at Smithsonian Station on track 1. The Train Operator was informed that they had contacted Ops 3 and that they would be transferred to Ops 2.

At 18:55 hours, the Train Operator reported to the Ops 2 Button RTC that they opened doors on the non-platform side at Smithsonian Station on track 1. The Button RTC inquired if the Train Operator's handheld radio was working and instructed them to return to the train and give a radio check. The Train Operator responded that their handheld radio was not working.

At 18:55 hours, the Radio RTC instructed Train ID 403 to hold at Federal Triangle Station, track 1. At 18:56 hours, the Radio RTC instructed the Rail Supervisor at L'Enfant Plaza Station to report to Smithsonian Station. The Button RTC contacted and notified the AOM and ROIC of the event and requested a Station Manager to assist with offloading the train. The ROIC Controller

contacted the Station Manager at Smithsonian Station and instructed them to report to the platform and assist with offloading the train.

At 18:57 hours, the Train Operator provided a radio check and reported that the train doors were open on the non-platform side and then closed. They advised that they were walking through the train, and no one had fallen from the train.

At 19:00 hours, the Rail Supervisor advised that they were located at Smithsonian Station.

At 19:02 hours, the Radio RTC instructed Train ID 403, located at Federal Triangle Station on track 1, to continue to Smithsonian Station. They advised that the train would single track between Smithsonian Station and Federal Center Station.

At 19:04 hours, the Rail Supervisor reported the train was clear of customers. The Radio RTC instructed the Rail Supervisor to re-block the Train ID to 703 and transport the train to New Carrollton Yard.

At 19:06 hours, Train ID 603 (703) departed at the Smithsonian Station. At 19:36 hours, Train ID 603 (703) arrived at New Carrollton Yard for storage.

Chronological ARS Timeline

A review of ARS playback, i.e., phone and radio communications, revealed the following timeline:

Time	Description
18:51:40 hours	Train ID 603 arrived at the Smithsonian Station. [SPOTS]
18:52:08 hours	Train Doors open on the platform side. [CCTV]
18:52:14 hours	Train Doors open on the non-platform side. [CCTV]
18:52:32 hours	Train Doors closed on the non-platform side. [CCTV]
18:52:44 hours	Train Doors closed on the platform side. [CCTV]
18:53:39 hours	Train Doors open on the platform side. [CCTV]
18:53:57 hours	The Train Operator exited the train with a bag, removed a cell phone from the bag, and made a phone call. [CCTV]
18:54:27 hours	Train ID 603: Reported to ROCC that the train doors opened on the non-platform side at Smithsonian Station on track 1. ROCC Button RTC: Advised the Train Operator that they had contacted OPS 3 and they would transfer the call. [Phone Ops 3]

Time	Description
18:55:01 hours	Train ID 603: Reported Button RTC that they opened doors on the non-platform side at Smithsonian Station on track 1. Button RTC: Stated, "Hold Train ID 403, Train ID 603 opened the doors off-platform." Inquired if the Train Operator's handheld radio was working and instructed them to return to the train and give a radio check. Train ID 603: Advised that the handheld radio was not working. Button RTC: Acknowledged and inquired about the lead car number. Train ID 603: Reported that the lead car was 7406. Button RTC: Acknowledged and advised to try the handheld radio, not to move the train, and inquired if the train doors were closed. Train ID 603: Advised that the train doors were closed, and they were walking through the train. Button RTC: Instructed to use the handheld radio. Train ID 603: Advised that the handheld radio was in their possession, and they were not sure if it was working. [Phone Ops 2]
18:55:36 hours	ROCC Radio RTC: Instructed Train ID 403 to hold at Federal Triangle Station. Train ID 403: Acknowledged and repeated. [Radio Ops 2]
18:55:59 hours	The Train Operator removed a handheld radio from their waist. [CCTV]
18:56:00 hours	ROCC Radio RTC: Instructed the Rail Supervisor located at L'Enfant Plaza Station, to report to Smithsonian Station. RTRA Supervisor: Acknowledged and repeated. ROCC Radio RTC: Instructed Train ID 912 to hold at Metro Center Station, track 1. Train ID 912: Acknowledged and repeated. [Radio Ops 2]
18:56:14 hours	ROCC Button RTC: Contacted and notified ROIC of the event and requested a Station Manager to assist with offloading the train. ROIC Controller: Acknowledged. [Phone Ops 2]
18:56:36 hours	ROIC Controller: Contacted the Station Manager at Smithsonian Station and instructed them to report to the platform and assist with offloading the train. [Phone RCOM 2]
18:56:31 hours	ROCC Button RTC: Notified the AOM of the event. [Phone Ops 2]
18:56:49 – 19:01:15 hours	The Train Operator walked the platform from the lead car to the trailing car, then back and entered the lead car. [CCTV]
18:57:14 hours	ROCC Radio RTC: Requested a radio check from the Train Operator. Train ID 603: Provided a radio check and reported that the train doors were open on the non-platform side and then closed. Advised that they were walking through the train, and no one had fallen from the train. ROCC Radio RTC: Inquired if the Train Operator had walked through the train to confirm if anyone had fallen from the train. Train ID 603: Advised that they were walking through the train. ROCC Radio RTC: Acknowledged. Instructed the Train Operator to offload the train. Train ID 603: Acknowledged and repeated. [Radio Ops 2]
19:00:55 hours	RTRA Supervisor: Stated located at Smithsonian Station. ROCC Radio RTC: Acknowledged. Instructed to assist with offloading the train. [Radio Ops 2]

Time	Description
19:02:11 hours	The customers begin to exit the train. [CCTV]
19:02:38 hours	ROCC Radio RTC: Instructed Train ID 403, located at Federal Triangle Station on track 1, to continue to Smithsonian Station. Advised that the train would single track between Smithsonian Station and Federal Center Station. [Radio Ops 2]
19:02:58 hours	Train Doors closed on the platform side. [CCTV]
19:03:00 hours	The Rail Supervisor boarded the trailing car and walked through the train to the lead car. [CCTV]
19:04:13 hours	RTRA Supervisor: Reported the train was clear of customers. ROCC Radio RTC: Instructed to re-block the Train ID to 703 and transport New Carrollton Yard. RTRA Supervisor: Acknowledged and repeated. [Radio Ops 2]
19:04:22 hours	Train ID 403 arrived at the Smithsonian Station on track 2. [SPOTS]
19:06:24 hours	Train ID 603 departed Smithsonian Station. [SPOTS]
19:07:22 hours	Train ID 403 departed Smithsonian Station. [SPOTS]
19:07:53 hours	Train ID 912 arrived at Smithsonian Station on track 1. [SPOTS]
19:35:12 hours	Train ID 603 (703) arrived at New Carrollton Station. [SPOTS]
19:36:54 hours	Train ID 603 (703) was dispatched to enter New Carrollton Yard. [Radio NC YD2]

***Note: Times above may vary from other systems' timelines based on clock settings and reporting sources.*

Advanced Information Management System (AIMS)

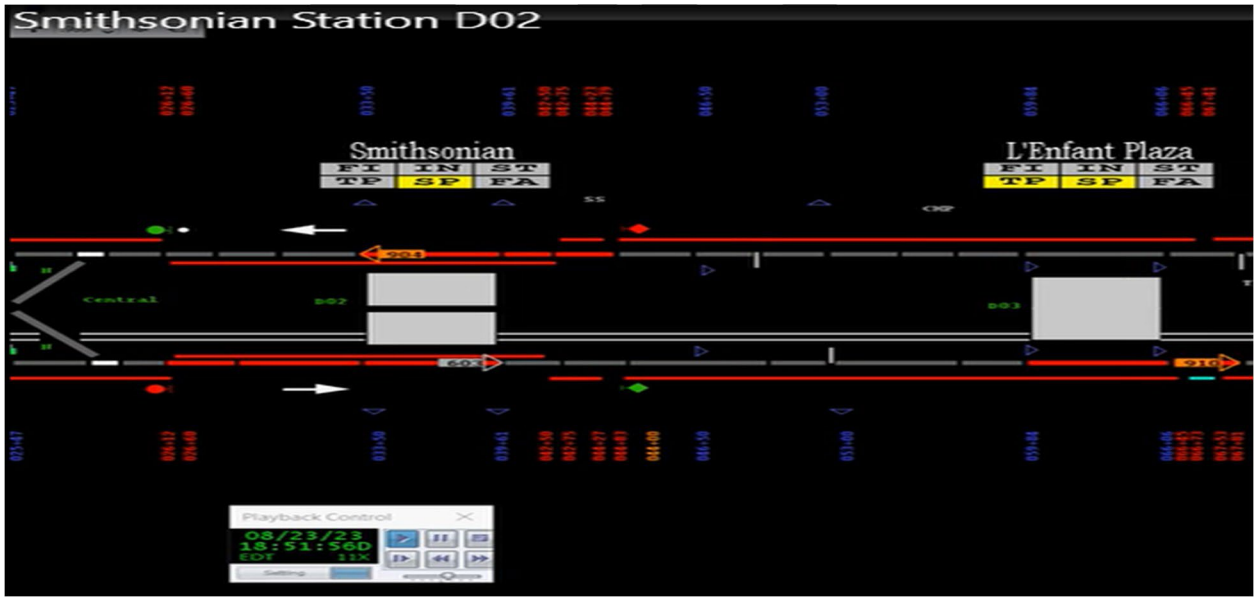


Figure 1 – AIMS playback depicting Train ID 603 at Smithsonian Station

The Office of Chief Mechanical Officer (CMOR) / Vehicle Monitoring and Diagnostic System (VMDS)

Adopted from CMOR IIT report with minor formatting and grammatical edits:
"Train ID 603 came to a complete stop at Smithsonian Station on track 1. The right-side Door Open pushbutton was activated. The ADU enable was activated and the right-side Door Open pushbutton was activated again, opening right-side doors.

Shortly after, the left-side Door Open pushbutton was activated, and left-side doors opened opposite of the platform side. The left-side Door Close pushbutton was activated 14 seconds later, closing left-side doors.

The right-side Door Close pushbutton was then activated, closing the left-side doors; achieving an All Doors Closed indication. The right-side Door Open pushbutton was activated, and the right-side doors were re-opened, then car 7406 keyed down.

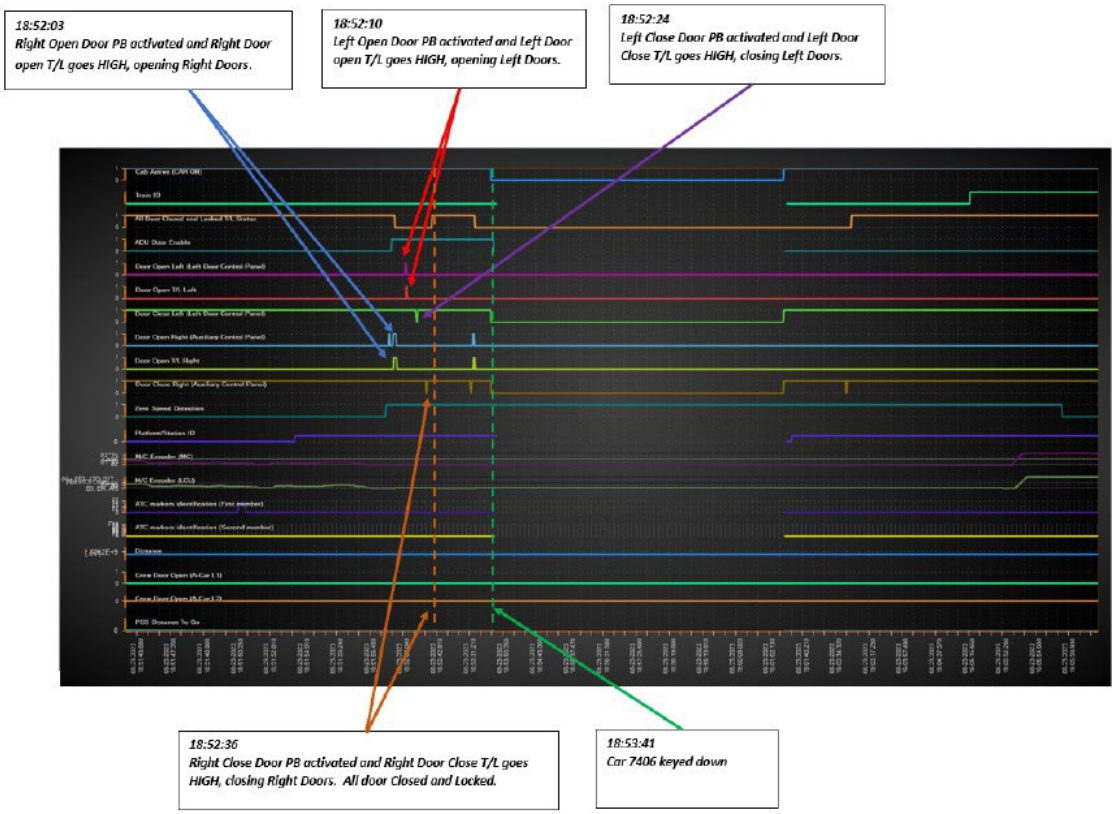
Car 7406 was keyed back up. The master controller was placed in a P5 power position, and the train continued in the direction of L'Enfant Plaza Station.

Based on the VMS data, there was no fault with the train that contributed to the cause of this incident. The train performed was commanded."

See timeline of events below:

Time	Description of Events
18:51:58.520	Train ID603 came to a complete stop at Smithsonian Station's 8-Car Marker, Track #1
18:52:00.430	Right Open Door pushbutton activated.
18:52:02.910	ADU Door Enable activated.
18:52:03.800	Right Open Door pushbutton activated, Right Open Door Trainline goes HIGH and Right-side Doors Open.
18:52:10.190	Left Open Door pushbutton activated and Left Door open trainlines goes HIGH, opening Left-side doors, opposite of platform side.
18:52:24.620	Left Close Door pushbutton activated and Left doors Close.
18:52:36.920	Right Close Door pushbutton was activated and Right Doors Close.
18:52:41.710	All Doors Closed and Locked Trainline goes HIGH, indicating all doors fully closed and locked
18:53:32.920	Right Close Door Pushbutton activated again.
18:53:34.680	Right Open Door pushbutton activated, and Right Open Door Trainline goes HIGH, opening Right-side Doors.
18:53:41.750	Car 7406 Keyed Down with Right-side doors open.
19:01:25.780	Car 7406 Keyed up.
19:02:51.310	Right Close Door pushbutton was activated and Right Doors Close.
19:02:56:080	All Doors Closed and Locked Trainline goes HIGH, indicating all doors fully closed and locked
19:05:54:610	Master Controller placed in a P5 Power Mode
19:05:56.630	Train began to move in the direction of L'Enfant Plaza

Note: Times above may vary from other systems' timelines based on clock settings.



Graph 1 - VMS Graph

Office of Rail Transportation (RTRA)

The Train Operator received administrative action and refresher training as a result of this event.

Office of Car Maintenance (CMNT)

Adopted from CMNT report with minor formatting and grammatical edits:
"IIT confirms that Car 3125 was the lead Car at the time of the incident. Based on the VMS data from Car 3124, both the Left and Right Door Open Push Buttons were pushed. Data confirms that Doors Opened and Closed properly. No Door Control Switches malfunctioned."

Office of Systems Maintenance, Office of Radio Communications (COMR)

No communication issues were identified during the course of this incident.

Interview Findings

As part of the investigation launched into the event, SAFE interviewed one person. The interview identified the following key findings associated with this event. The findings detailed below include reported information from involved personnel and may conflict with other data sources contained in the report.

Train Operator Train ID 603

- The Train Operator stated that they became distracted prior to the event when they were focused on the automated announcements.
- The Train Operator stated that they inadvertently pressed the left-side door open pushbutton, then lost focus and panicked.
- The Train Operator stated that they exited the train and contacted ROCC via cell phone because they were embarrassed.
- The Train Operator stated that they initially reported that their handheld radio was not working but acknowledged that it was functional at the time.

Weather

At the time of the incident, NOAA recorded the temperature at 73° F, partly cloudy. Smithsonian Station is located within a tunneled section of the rail system. The weather did not contribute to this incident. (Weather source: NOAA – Location: Washington, DC)

Related Rules and Procedures

MSRPH SOP #40: Door Operations and Station Servicing Procedures.

Human Factors

Fatigue

Signs and Symptoms of Fatigue

Conditions at the time of the incident were evaluated to distinguish whether evidence of fatigue was present. Video of the incident, post-incident on the platform, was available to assess behaviors suggesting fatigue. No determination of fatigue was identified. The employee reported feeling fully alert at the time of the incident and reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

Incident data was evaluated for fatigue risk factors. There were no significant risk factors for fatigue identified. The incident time of day (18:52 hours) does not suggest an increased risk of fatigue-related impairment. The employee worked afternoon shifts (15:00 – 01:00 hours) in the days leading up to the incident. The employee reported 9 hours of sleep in the last sleep period preceding the incident and was awake for 7.5 hours at the time of the incident. The employee was off duty at 01:30 hours (a calculated total of 13.50 hours), which provided the opportunity for 7-9 hours of sleep. The employee reported usual workday sleep durations of 8.5 hours and no issues with sleep. Since fatigue evidence and risk factors were absent, the biomathematical fatigue modeling application (SAFTE-FAST Web SFC) was not applied.

Post-Incident Toxicology Testing

WMATA's Drug and Alcohol Program determined that the Train Operator complied with and was not in violation of the Drug and Alcohol Policy and Testing Program 7.7.3/6.

Work History

- The Train Operator certified as a Train Operator on their second attempt in March 2023.
- The Train Operator failed to qualify on troubleshooting on their first attempt.

Findings

- The train doors were activated manually and remained open off the platform side for 18 seconds before they were closed.
- The Train Operator exited the train and contacted Rail Ops 3 utilizing a cell phone while on the platform to report the incident.
- There were no mechanical defects found with the rail vehicle.

Immediate Mitigation to Prevent Recurrence

- A Rail Supervisor took over operating the train.
- The Train Operator was removed from service for post-incident testing.

Probable Cause Statement

The probable cause of the Improper Door Operation event on August 23, 2023, at Smithsonian Station, was the loss of situational awareness by the Train Operator when they became focused on the automated train announcements.

Recommended Corrective Actions

Corrective Action Code	Description	Responsible Party	Estimated Completion Date
110939_SAFECAPS_RTRA_001	Train Operator to receive refresher training with an emphasis on SOP #40.	RTRA SRC	Completed

Appendices

Appendix A – Interview Summary

The below narratives summarize the incident and represent the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

RTRA

Train Operator

The Train Operator is a WMATA employee with eight total years of service, with four months of experience as a Train Operator. The Train Operator holds a Roadway Worker Protection (RWP) Level 2 certification that expires in August 2023.

During the formal interview, the Train Operator stated they were operating Train ID 603 on the event date and arrived at the Smithsonian Station. It was the Train Operator's second trip.

The Train Operator stated that they opened the platform side doors, then focused on listening to the automatic onboard announcement on the 7K series car and became distracted.

The Train Operator stated they inadvertently opened the train doors on the opposite side of the platform. Once they realized the mistake, they immediately closed the doors.

The Train Operator stated they were somewhat confused and panicked after the event, so they exited the cab to the platform, neglecting to use the cab radio or handset to contact ROCC. Once on the platform the Train Operator used a personal cell phone to call OPS. The Train Operator called OPS 3 by mistake and was transferred to OPS 2 to complete the notification.

The Train Operator stated that they began a ground walk as they were calling OPS.

The Train Operator acknowledged that they did not follow the procedures.

Appendix B –RTRA Incident Report

WMATA/RTRA Incident/Accident Report (Other than Motor Vehicle) Page 1 of 2

Incident Information: This page must be completed for all incidents

Date:	Incident Time:	Time Reported:	Reported by: Customer ☐ Employee ☒ ROCC ☐ Other ☐
8-23-23	6:55 PM		

Location

Station	Mezzanine #	Track #/Destination	Chain Marker/Signal Number
SMITHSONIAN		1 LARGO	

TYPE OF INCIDENT

☐ Property Damage	☐ Smoke	☐ Fire	☐ Customer Complaint
☐ Customer injury	☐ Customer Illness	☐ Employee Injury	☐ Employee Illness
☐ Criminal Activity	☐ Elevator Entrapment	☐ Rail Vehicle Incident	☒ Other (Explain in description of incident)

WEATHER	LIGHT CONDITIONS (natural lighting)	LIGHTING (artificial lighting)
Clear ☐ Rain ☐	Dawn/Dusk ☐ Daylight ☐	Lights On ☐ Lights Off ☐
Snow ☐ Sleet/Ice ☐	Dark ☐ Tunnel/Underground ☐	Lights Not Working ☐

STATION INCIDENTS: Always include equipment number you use for MOC/AFC/EOC

Elevator/Escalator#:	AFC #:	Room Number/Location:

Failure Number(s):

Parking Lot ☐ Paid Area ☐ Free Area ☐ Garage ☐ Station Entrance ☐ Stairway # ____☐ Platform ☐ Ancillary Room ☐
Injury/Illness reported aboard Train ☐ Other ☐ _____

Name of Responding Supervisor:	Name/Department of PLNT/AFC or other WMATA responder

TRAIN INCIDENTS

Train ID	Destination	Car Numbers(list all cars in consist):	Lead Car:
603	LARGO		7406

Name of Responding Supervisor [redacted]

[redacted] **Include what you did to correct the problem and who you notified and when.**

Describe any property damage and the extent of any injuries.

TO BE HONEST I DONT KNOW WHAT HAPPENED TO ME IN THAT MOMENT. I OPENED THE DOOR ON THE PLATFORM SIDE AND THEN I WAS JUST WAITING FOR THE ANNOUNCEMENT TO FINISH. THAT IS THE MOMENT WHENT I GOT OUT AND WENT TO THE LEFT SIDE BY MISTAKE TO CLOSE THE DOOR. I DONT KNOW WHY I OPENED THE DOOR BUT THEN I JUST GOT NERVOUS AND I LOST CONTROL THEN I TRY TO CLOSE THE DOOR AND VERIFY THAT NO BODY FELL. I GOT SCARED AND THEN I GOT OFF FROM THE TRAIN AND CALLED CENTRAL AND THEN I WENT TO VERIFY THE [redacted] CARS. I WAS ALREADY LOST BY THEN

Employee Completing Report

Employee Name:(print)	Employee Signature:(sign)	Employee #:	Date:
[redacted]	[redacted]	[redacted]	8-23-23

Division:	Run #	Block #	Assigned Days:
DULLES	508	603	F/S

To Be Completed By Reviewing Manager

Supervisor Name:(print)	Supervisor Signature	Employee #	Date:
[redacted]	[redacted]	[redacted]	8-23-23

Action taken/needed: filed

AUG 29 PM 10:41

SMS Number: 2023 0823 # 110880MX

50.753A 04/12 White Copy: Division or Supervisor Yellow Copy: For any incident involving escalators or elevators; remains in kiosk for use of elevator/escalator inspectors

Document 1 - Train Operator's Written Statement page 1 of 1

Appendix C – Train Operator Certification Documents

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION

Name:	[redacted]	Emp.No:	[redacted]	Division:	Training	Date:	3/23/2023

Reason for Certification: *Please place a check in an area below.*

☐ Certification: Student ☐ Pre-certification: Student ☐ Division Request ☐ Re-Certification ☐ Return to Duty ☐ Other_____

Exam Administered	Score	Date Taken
MSRPH version #:	97%	2/22/2023
TVOIM/TOIM	92%	2/22/2023
Supervisor Combination	%	
Practical attempt #:1	QL-3	3/23/2023

Equipment *(current/working condition)*	Yes	No
MSRPH	✓	
Perm/Temp/Special Orders	✓	
Troubleshooting Guide	✓	
Flashlight	✓	
Safety Vest	✓	
Footwear	✓	
Identification (One Badge, RWP)	✓	

Comments

Student Operator [redacted] must retake category IV Troubleshooting on second attempt.

Signatures:	Date:
Employee: [redacted]	3-23-2023
Examiner:	3/23/2023

RTRA-906-01-00 TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION Page 1

Document 1 - Train Operator's First Certification Attempt Page 1 of 2

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION (continuation sheet) Emp No.: [redacted] Date: 03/23/2023

CATEGORIES / SUBCATEGORIES	QUALITY LEVEL	REMARKS (*Remarks are required for a quality level score of 2 or 3*)
I. Preparation for Service		Cars Used: 7738-7739 X 7439-7438
1. Exterior Inspection	1	#7738 Tail/Marker C/B Tripped #7738 Missing Emergency Evacuation Board
2. Interior Inspection - Trailing Cab	1	#7438 BCCO/BCO C/O
3. Interior Inspection - Each Car	1	#7739 Rotary Drum down in the belly
4. Interior Inspection – Oper. Cab	1	#7738 Barrier Unsecured
5. Rolling Test / Rolling Brake Test	1	
		Time Allotted: 35:00 / Actual Time: 30:30
II. Mainline Operation		
6. Communications	2	Student Operator needed ROCC to repeat instructions on numerous occasions.
7. Door Oper. & Station Stopping	1	
8. Use of Horn	1	
9. Speed Adherence/Manual Oper.	1	
10. Turn Back Moves	1	Location: A11 Time Allotted: 02:00 / Actual Time: 1:24
11. Manual Route Selection	1	Location: A11-34
12. EV Shutoff	1	Time Allotted: 00:30 (1:00) / Actual Time: 00:12
III. Yard Operation		
13. Communications	1	
14. Yard Movements	1	
15. Coupling	1	Time Allotted: 08:00 (12) / Actual Time: 7:00 Cars Used:7397+7175
16. Uncoupling	1	Time Allotted: 05:00 (7.5) / Actual Time: 4:03 Cars Used: 7174<7738
17. Isolation (Self-Recovery)	1	Time Allotted: 15:00 (22.5) / Actual Time: 13:29 Cars Used:7174+7738
18. Manual Switch Operation	1	Switch #85
IV. Miscellaneous		
19. Recovery Train Operation	1	Time Allotted: 12:00 (18) / Actual Time: 11:29 Cars Used: 7738+7174
20. Troubleshooting	3	
#1 No All Doors Closed (Passenger Door Obstructed) Car#7175 Time: 5:02		
#2 No Brakes Off/Stuck Holding Brake (Holding Brake Value C/O) Car#7174 Time: 9:46 Student Operator did not enter stop and proceed prior to attempting troubleshooting procedures. Student Operator offloaded passengers on the non-platform side. Student Operator cut-out only the holding brake on car #7174		

RTRA-906-01-00 TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION Page 2

Document 2 - Train Operator's First Certification Attempt Page 2 of 2

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION

Name:	[redacted]	Emp.No:	[redacted]	Division:	Rail Training	Date:	3-27-2023

Reason for Certification: *Please place a check in an area below.*

☑ Certification: Student ☐ Pre-certification: Student ☐ Division Request ☐ Re-Certification ☐ Return to Duty ☐ Other_____

Exam Administered	Score	Date Taken
MSRPH version #:	%	
TVOIM/TOIM	%	
Supervisor Combination	%	
Practical attempt #: 2nd	QL- Pass	3-27-2023

Equipment *(current/working condition)*	Yes	No
MSRPH	✓	
Perm/Temp/Special Orders	✓	
Troubleshooting Guide	✓	
Flashlight	✓	
Safety Vest	✓	
Footwear	✓	
Identification (One Badge, RWP)	✓	

Comments

Signatures:	Date:
Employee: [redacted]	3-27-23
Examiner:	3-27-2023

RTRA-906-01-00 TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION Page 1

Document 3 - Train Operator's Second Certification Attempt Page 1 of 2

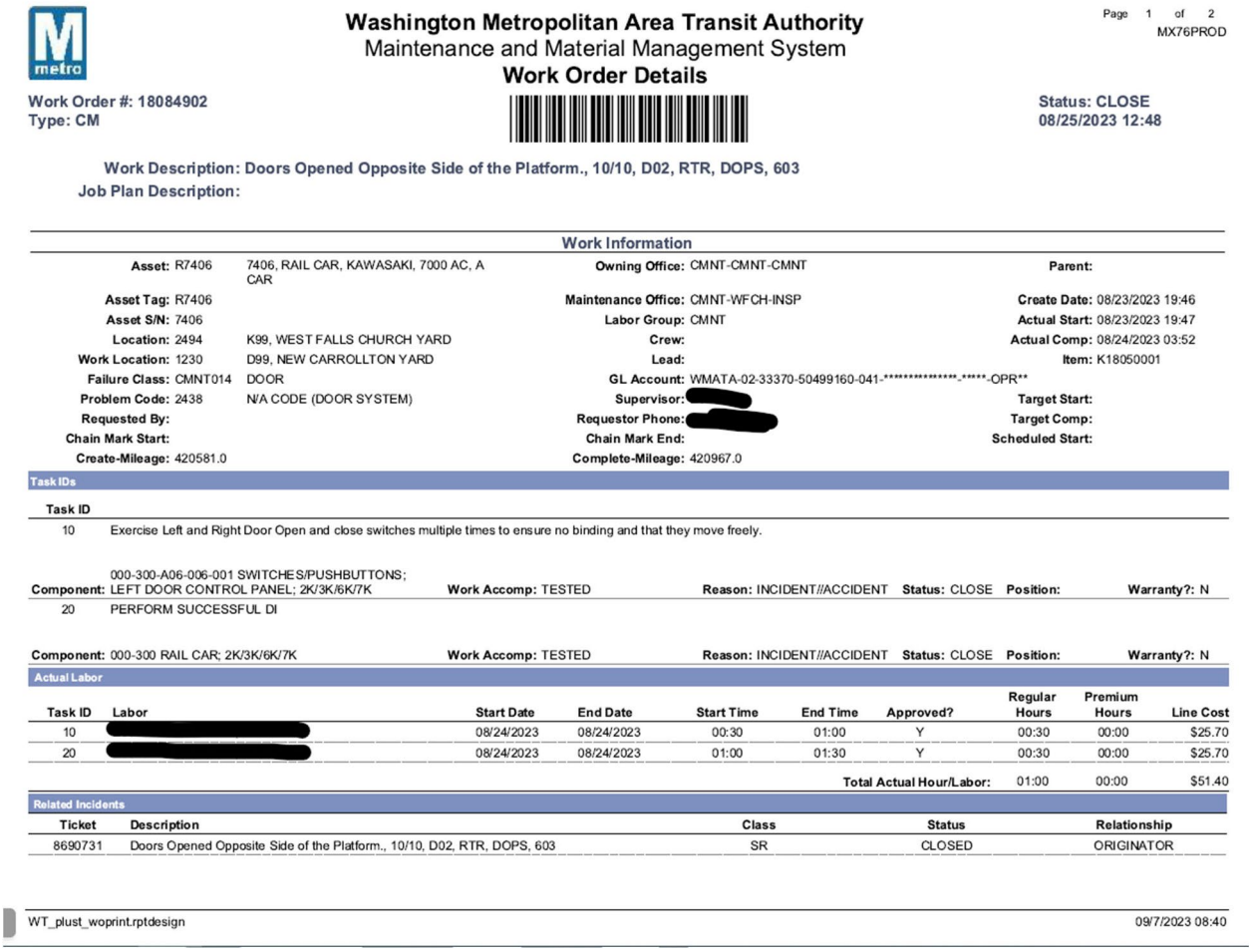
TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION (continuation sheet) Emp No.: [redacted] Date: 3-27-2023

CATEGORIES / SUBCATEGORIES	QUALITY LEVEL	REMARKS (*Remarks are required for a quality level score of 2 or 3*)
I. Preparation for Service		Cars Used:
1. Exterior Inspection		
2. Interior Inspection - Trailing Cab		
3. Interior Inspection - Each Car		
4. Interior Inspection – Oper. Cab		
5. Rolling Test / Rolling Brake Test		
		Time Allotted: 35:00 / Actual Time: :
II. Mainline Operation		
6. Communications		
7. Door Oper. & Station Stopping		
8. Use of Horn		
9. Speed Adherence/Manual Oper.		
10. Turn Back Moves		Location: Time Allotted: 02:00 / Actual Time: :
11. Manual Route Selection		Location:
12. EV Shutoff		Time Allotted: 00:30 (1:00) / Actual Time: :
III. Yard Operation		
13. Communications		
14. Yard Movements		
15. Coupling		Time Allotted: 08:00 (12) / Actual Time: : Cars Used: +
16. Uncoupling		Time Allotted: 05:00 (7.5) / Actual Time: : Cars Used: < >
17. Isolation (Self-Recovery)		Time Allotted: 15:00 (22.5) / Actual Time: : Cars Used:
18. Manual Switch Operation		
IV. Miscellaneous		
19. Recovery Train Operation		Time Allotted: 12:00 (18) / Actual Time: : Cars Used: +
20. Troubleshooting #1	1	Friction Break C/B car# 7651 (6min) Cars Used 7240-7651-7008-7645
#2	1	Pax Door Open car# 7241 (4min)

RTRA-906-01-00 TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION Page 2

Document 4 - Train Operator's Second Certification Attempt Page 2 of 2

Appendix D – Maximo Reports



Page 1 of 2
MX76PROD

Washington Metropolitan Area Transit Authority
Maintenance and Material Management System
Work Order Details

Work Order #: 18084902
Type: CM

Status: CLOSE
08/25/2023 12:48

Work Description: Doors Opened Opposite Side of the Platform., 10/10, D02, RTR, DOPS, 603
Job Plan Description:

Work Information

Asset:	R7406	7406, RAIL CAR, KAWASAKI, 7000 AC, A CAR	**Owning Office:**	CMNT-CMNT-CMNT	**Parent:**
Asset Tag:	R7406		**Maintenance Office:**	CMNT-WFCH-INSP	**Create Date:** 08/23/2023 19:46
Asset S/N:	7406		**Labor Group:**	CMNT	**Actual Start:** 08/23/2023 19:47
Location:	2494	K99, WEST FALLS CHURCH YARD	**Crew:**		**Actual Comp:** 08/24/2023 03:52
Work Location:	1230	D99, NEW CARROLLTON YARD	**Lead:**		**Item:** K18050001
Failure Class:	CMNT014	DOOR	**GL Account:**	WMATA-02-33370-50499160-041-**********-*****-OPR**	
Problem Code:	2438	N/A CODE (DOOR SYSTEM)	**Supervisor:**	[redacted]	**Target Start:**
Requested By:			**Requestor Phone:**	[redacted]	**Target Comp:**
Chain Mark Start:			**Chain Mark End:**		**Scheduled Start:**
Create-Mileage:	420581.0		**Complete-Mileage:**	420967.0	

Task IDs

Task ID	
10	Exercise Left and Right Door Open and close switches multiple times to ensure no binding and that they move freely.

Component:	000-300-A06-006-001 SWITCHES/PUSHBUTTONS; LEFT DOOR CONTROL PANEL; 2K/3K/6K/7K	**Work Accomp:** TESTED	**Reason:** INCIDENT//ACCIDENT	**Status:** CLOSE	**Position:**	**Warranty?:** N
20	PERFORM SUCCESSFUL DI					
Component:	000-300 RAIL CAR; 2K/3K/6K/7K	**Work Accomp:** TESTED	**Reason:** INCIDENT//ACCIDENT	**Status:** CLOSE	**Position:**	**Warranty?:** N

Actual Labor

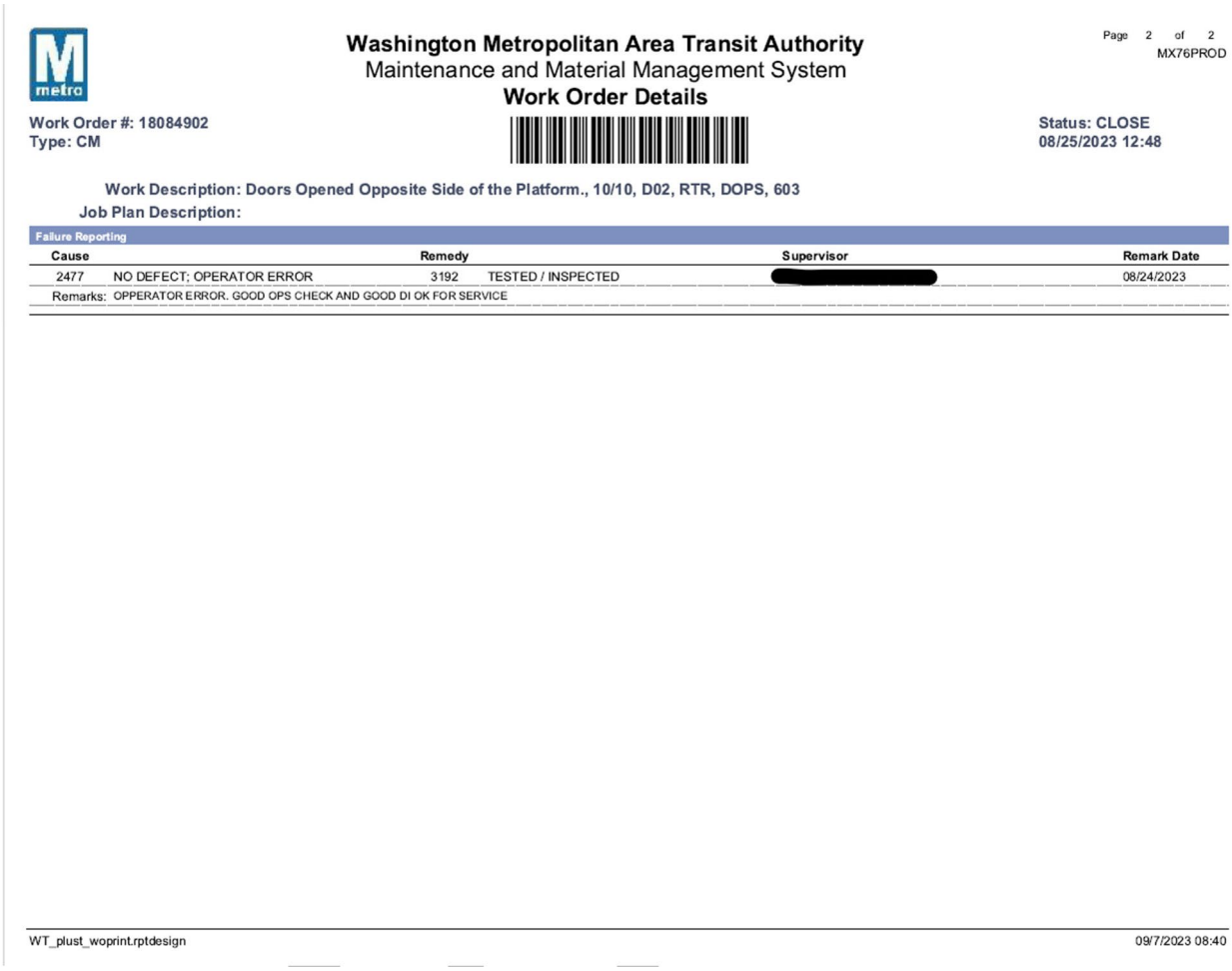
Task ID	Labor	Start Date	End Date	Start Time	End Time	Approved?	Regular Hours	Premium Hours	Line Cost
10	[redacted]	08/24/2023	08/24/2023	00:30	01:00	Y	00:30	00:00	$25.70
20	[redacted]	08/24/2023	08/24/2023	01:00	01:30	Y	00:30	00:00	$25.70
						Total Actual Hour/Labor:	01:00	00:00	$51.40

Related Incidents

Ticket	Description	Class	Status	Relationship
8690731	Doors Opened Opposite Side of the Platform., 10/10, D02, RTR, DOPS, 603	SR	CLOSED	ORIGINATOR

WT_plust_woprint.rptdesign 09/7/2023 08:40

Document 5 - Maximo Work Order showing No Trouble Found. Page 1 of 2



Washington Metropolitan Area Transit Authority
Maintenance and Material Management System
Work Order Details

Page 2 of 2
MX76PROD

Work Order #: 18084902
Type: CM

Status: CLOSE
08/25/2023 12:48

Work Description: Doors Opened Opposite Side of the Platform., 10/10, D02, RTR, DOPS, 603
Job Plan Description:

Failure Reporting

Cause		Remedy		Supervisor	Remark Date
2477	NO DEFECT; OPERATOR ERROR	3192	TESTED / INSPECTED	[redacted]	08/24/2023
Remarks:	OPPERATOR ERROR. GOOD OPS CHECK AND GOOD DI OK FOR SERVICE				

WT_plust_woprint.rptdesign 09/7/2023 08:40

Document 6 - Maximo Work Order showing No Trouble Found. Page 2 of 2.

Appendix E – Why-Tree Analysis