



**WMSC Commissioner Brief: W-0180 – Improper Door Operation – Stadium-Armory Station – May 6, 2022**

*Prepared for Washington Metrorail Safety Commission meeting on September 20, 2022*

**Safety event summary:**

A Train Operator stopped their train (Train 607) near the middle of the Stadium-Armory Station platform at approximately 6:02 a.m. and opened the doors while the two trailing cars were still in the tunnel. The Train Operator closed the doors approximately 41 seconds later, then opened the doors again with the two trailing cars still in the tunnel. The Train Operator did not report any aspect of this safety event, closed the doors a second time, moved the train forward to the end of the platform, then opened the doors again. The Train Operator continued on.

During this time when the train was in and around the station for a longer than usual period, the Rail Traffic Controller radioed to ask if Train 607 was okay, but the Train Operator did not respond for approximately 3 minutes. The Rail Traffic Controller then contacted a Rail Supervisor at 6:06 a.m. to ask that the Supervisor check on Train 607 at Potomac Avenue Station. The Train Operator then contacted the Rail Traffic Controller at approximately 6:07 a.m. There were possible radio communication challenges during this conversation (based on the responses from the Train Operator).

Closed-Circuit Television (CCTV) shows the Train Operator had stopped at Stadium-Armory Station with two cars remaining in the tunnel. The Train Operator looked out the window and opened the doors on the platform side. The Train Operator then closed the doors, opened the doors, and closed them again. The Train Operator then moved the train forward approximately 250 feet to near the end of the platform which is where all trains are required to stop to service a station. The Train Operator opened the doors, closed the doors, then departed.

A rider who safely got off the train at Stadium-Armory Station informed the Station Manager of the improper door operation. The Station Manager contacted the Rail Operations Information Center (ROIC) in the Rail Operations Control Center (ROCC) at 6:06 a.m. The Information Controller at the ROIC desk conveyed the information to the Rail Traffic Controller at 6:07 a.m., who then notified the ROCC Assistant Operations Manager at 6:09 a.m.

The Rail Supervisor who had boarded the train at Potomac Avenue briefly talked to the Train Operator but then got off the train. This meant that when the Rail Traffic Controller instructed the Supervisor to take over operations of the train, that Supervisor could not do so.

At approximately 6:12 a.m., the Radio Rail Traffic Controller asked the Train Operator if the Train Operator had serviced Stadium-Armory Station while not properly berthed on the platform. The Train Operator affirmed that they had. At this time, the train was near L'Enfant Plaza Station.

At 6:17 a.m., the Rail Traffic Controller instructed a different Rail Supervisor to board the train farther down the line, initially at Rosslyn Station.

No ground walkaround or track inspection was conducted at Stadium-Armory Station.

At approximately 6:27 a.m., the second Rail Supervisor took over operation of the train and the Train Operator was taken out of service.



This Train Operator had previously moved a train without speed commands at Federal Center SW Station on April 20, 2022, approximately 2.5 weeks before this event. Metrorail's Office of Rail Transportation (RTRA) Quality Assurance/Quality Control Group had identified this while conducting an audit to examine Train Operator compliance with rules regarding movement without speed commands. Five regular RTRA supervisory checks in March, April and May had identified no issues with this operator (see WMSC Rail Operations Audit information below regarding these checks).

Following this improper door operation event and the previously identified movement without speed commands, RTRA disqualified the Train Operator from rail operations for two years.

**Probable Cause:**

The probable cause of this event was Metrorail's ineffective supervisory oversight, insufficient recertification practices, and culture of noncompliance with written operational rules, procedures and manuals.

**Corrective Actions:**

Metrorail is implementing corrective action plans (CAPs) associated with the WMSC's Rail Operations Audit issued in April 2022. Metrorail has committed to completing the CAP for Finding 1 of the audit 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).

**WMSC staff observations:**

This event provides another example of safety gaps identified in Finding 1 of the WMSC's Rail Operations Audit issued in April 2022, a month prior to this event, that "elements of Metrorail have a culture that accepts noncompliance with written operational rules, instructions and manuals." As specified in that report, despite numerous documented issues, rail supervisor entries in the Rail Supervisor Daily Activity Report (RSDAR) system identify very few problems, suggesting a culture that expects noncompliance with rules. The gap between what is documented in the supervisory checks and what is occurring in reality provides evidence of deficiencies in supervisory oversight and primary operational rule checks.

Metrorail is in the process of implementing corrective action plans to address findings from the Rail Operations Audit.



Washington Metro Area Transit Authority  
Department of Safety – Office of Investigations (OSI)

**FINAL REPORT OF INVESTIGATION A&I E22278**

<b>Date of Event:</b>	May 6, 2022
<b>Type of Event:</b>	Improper Door Operation
<b>Incident Time:</b>	06:02 Hours
<b>Location:</b>	Stadium-Armory Station, track 2
<b>Time and How received by SAFE:</b>	06:15 Hours – SAFE/MAC
<b>WMSC Notification Time:</b>	06:55 Hours
<b>Responding Safety Officers:</b>	WMATA: N/A WMSC: N/A Other: N/A
<b>Rail Vehicle:</b>	L3056/57x2054/55x3071/70T
<b>Injuries:</b>	None
<b>Damage:</b>	None
<b>SMS I/A Incident Number:</b>	20220506#100115MX

# Stadium-Armory Station – Improper Door Operation

May 6, 2022

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## **Abbreviations and Acronyms**

<b>ARS</b>	Audio Recording System
<b>CAP</b>	Corrective Action Plan
<b>CCTV</b>	Closed-Circuit Television
<b>CMOR</b>	Office of Chief Mechanical Officer
<b>COMR</b>	Office of Radio Communications
<b>IIT</b>	Incident Investigation Team
<b>MOC</b>	Maintenance Operation Control
<b>MSRPH</b>	Metrorail Safety Rules and Procedures Handbook
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>OSI</b>	Office of Investigations
<b>RTC</b>	Rail Traffic Controller
<b>RTRA</b>	Office of Rail Transportation
<b>ROCC</b>	Rail Operations Control Center
<b>ROIC</b>	Rail Operations Information Center
<b>SAFE</b>	Department of Safety and Environmental Management
<b>SMS</b>	Safety Measurement System
<b>SOP</b>	Standard Operating Procedures
<b>VMDS</b>	Vehicle Monitoring and Diagnostic System
<b>WMATA</b>	Washington Metropolitan Area Transit Authority
<b>WMSC</b>	Washington Metrorail Safety Commission

**Washington Metropolitan Area Transit Authority**  
**Department of Safety & Environmental Management**

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**Executive Summary**

On Friday, May 6, 2022 at approximately 06:06 hours, the Station Manager located at Stadium-Armory Station notified the Rail Operations Information Center (ROIC) Information Controller that a customer aboard Train ID 607 (L3056/57x2054/55x3071/70T) reported that the Train Operator stopped the train in the tunnel, opened the train doors and made an announcement, closed the doors and moved the train onto the platform, and opened the doors for the customers to exit the train. At approximately 06:07 hours, the Information Controller notified the Rail Operations Control Center (ROCC) Rail Traffic Controller (RTC) and relayed the report from the Station Manager. At approximately 06:09 hours, the RTC notified the Assistant Operations Manager (AOM) of the report.

At approximately 06:12 hours, the Radio RTC contacted the Train Operator and inquired if they had serviced Stadium-Armory Station while not properly berthed on the platform. The Train Operator replied, "affirm." At approximately 06:17 hours, the RTC instructed an Office of Rail Transportation (RTRA) Rail Supervisor to board Train ID 607 when the train arrives at Rosslyn Station and take over train operations.

The Closed-Circuit Television (CCTV) confirmed that Train ID 607 entered the platform at Stadium-Armory Station, track 2 and stopped with four rail cars on the platform with two rail cars remaining in the tunnel. The Train Operator looked out of the window in the operator's cab and opened the doors on the platform side, closed the doors, then opened and closed the doors again. The Train Operator adjusted the train to the 8-car marker, then opened and closed the doors, then departed the station.

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

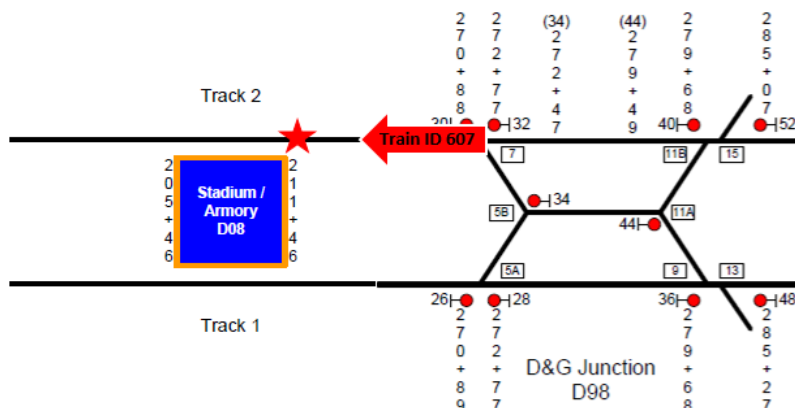
The probable cause of the Improper Door Operation event was a lapse in attention by the Train Operator when they failed to perform their duties as outlined in the MSRPH and neglected to pay full time attention to their position on the platform, prior to operating the platform-side doors. An additional contributing factor was ineffective oversight of the Train Operator, as this was the second significant violation by them within a three-week period. On April 20, 2022, the Operator was cited for moving their train without speed commands.

There were no injuries or damage related to this incident.

**Incident Site**

Stadium-Armory Station, track 2

## Field Sketch/Schematics



*\*Locations are approximate. 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

Upon discovery of the Improper Door Operation event at Stadium-Armory Station on May 6, 2022, SAFE engaged with a cross-functional team to assess the scene and conduct the subsequent investigation. SAFE team members worked with relevant Washington Metropolitan Area Transit Authority (WMATA) subject matter experts to review the incident's facts and data.

The investigative methodologies included the following:

- Site Assessment through document review
- Formal Interviews – SAFE interviewed the Train Operator as part of this investigation. The interview included representatives from the Washington Metrorail Safety Commission (WMSC).

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

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

- Metrorail Safety Rules and Procedures Handbook (MSRPH)
- Train Operator Training Records
- Train Operator 30-Day Work History
- Rail Supervisor Daily Activity Reports
- National Oceanic and Atmospheric Administration (NOAA)
- Rail Operations Control Center (ROCC) Incident Report

- Maintenance Operations Center (MOC) Daily Summary
- Maximo Data

System Data Recording Review – Collection of information contained in Metro Data Recording Systems. This data includes:

- 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)
- Office of Radio Communications (COMR) radio communication operational check
- Closed-Circuit Television (CCTV)

## **Investigation**

On Friday, May 6, 2022, at approximately 06:02 hours, Train ID 607, a six-car train consist, entered the platform limits at Stadium-Armory Station, track 2. The train stopped at the four-car platform marker leaving two rail cars outside of the platform limits in the tunnel area on track two of Stadium-Armory Station. This action was not in accordance with, MSRPH SOP #40.5.1.5.1 which states, “Make eight-car stops will all trains unless otherwise directed by ROCC (Ensure the train is properly berthed on the platform for the number of cars in the consist).” Within the same minute, the Train Operator depressed the left doors open pushbutton, causing all doors on the left side of the train consist to open, including the two rail cars that were located outside of the platform limits. This action was not in accordance with MSRPH SOP #40.5.1 Door Opening Procedures.

At approximately 06:03 hours, the left doors closed pushbutton was activated and all doors closed. Within the same minute, the left doors open pushbutton was activated again and all doors on the left side of the train consist opened, including the two rail cars that were located outside of the platform limits. Seconds later, the left doors closed pushbutton was activated and all doors closed. The Train Operator did not immediately report the incident to ROCC. This action was not in accordance with MSRPH, General Rule 1.32, *Employees involved in, witnessing, or informed of an accident or incident, to include near misses, on the Metrorail System shall inform their supervisor, Transit Police, ROCC and/or other appropriate authority as soon as possible, and shall file a written report.*





*Image 1 – Train ID 607, a 6-car train consist at Stadium-Armory Station with doors open without being fully berthed on the platform.*

At approximately 06:04 hours, the Train Operator moved the train and stopped at the eight-car marker at Stadium-Armory Station, track 2 with all rail cars on the platform. Within the same minute, the Train Operator depressed the left doors open pushbutton causing all doors on the left side of the train consist to open. Train ID 825 contacted ROCC and reported no speed commands in approach to Stadium-Armory Station, track 2. The RTC advised Train ID 825 that there was a revenue train ahead servicing Stadium-Armory Station. Seconds later, the left doors closed pushbutton was activated and all doors closed. Train ID 607 continued to the next station. The RTC inquired if Train ID 607 was ok and did not receive a response.

At approximately 06:06 hours, the RTC contacted a Rail Supervisor and requested that they make visual contact with the Train Operator of Train ID 607 at Potomac Avenue Station. Within the same minute, the Station Manager located at Stadium-Armory Station reported to ROIC that a customer aboard Train ID 607 reported that the Train Operator stopped the train in the tunnel, opened the train doors then made an announcement, closed the doors, moved the train onto the platform and opened the doors for the customers to exit the train.

At approximately 06:07 hours, the Train Operator of Train ID 607 contacted ROCC. The RTC informed the Train Operator that they were seven minutes behind schedule. The Train Operator repeatedly attempted to contact ROCC, however, the transmissions were unsuccessful. The RTC advised the Train Operator to use their handheld radio to communicate. At approximately 06:08 hours, the RTC requested a radio check from Train ID 607, the Train Operator acknowledged, the RTC inquired if there was a problem with the train and that the train was seven minutes behind schedule. The RTRA Supervisor advised the RTC that they were aboard the train and would make visual contact with the Train Operator when they arrived at the lead car.

At approximately 06:09 hours, the RTC notified the AOM of the report of Train ID 607 opening the train doors without being properly berthed on the platform. The ROCC Management team began

to review CCTV to confirm the event. At approximately 06:10 hours, the RTRA Supervisor notified the RTC that the Train Operator stated that they received an RWP violation the week prior and that they are operating the train in accordance with the Standard Operating Procedures (SOP). The RTC requested that the RTRA Supervisor take over operating Train ID 607; however, the RTRA Supervisor reported that they had already exited the train.

At approximately 06:12 hours, the Radio RTC contacted the Train Operator and inquired if they had serviced Stadium-Armory Station while not properly berthed on the platform. The Train Operator replied, "affirm." The RTC requested that a second RTRA Supervisor contact ROCC via landline. At approximately 06:14 hours, the ROCC Operations Manager (OM) inquired if Train ID 607 was having mechanical issues. The RTC advised the OM of the report that Train ID 607 opened the doors in the tunnel, closed the doors, then serviced the platform. The OM began to review the CCTV.

At approximately 06:17 hours, the RTC instructed the second RTRA Supervisor to intercept Train ID 607 at Rosslyn Station. At approximately 06:27 hours, they took over operating Train ID 607 and the Train Operator was taken out of service. The Train Operator was escorted for post-incident toxicology testing. The testing determined that the Train Operator was not in violation of the Drug and Alcohol Policy and Testing Program.

The Office of Rail Transportation (RTRA) conducted a total of five Rail Supervisor Daily Activity (RSDAR) Reports with the Train Operator before this incident between March 2022 and May 2022. All reports concluded with favorable results.

The Incident Investigation Team (IIT) performed an inspection and determined that at approximately 06:02 hours, Train ID 607, lead car 3056 entered Stadium-Armory Station, track 2 platform limits, the train stopped approximately 340 feet into platform limits with 110 feet of the train outside of the platform limits. Seconds later the left door open pushbutton was activated. At approximately 06:03 hours, the left door closed pushbutton was activated. Seconds later the left door open pushbutton was activated again and seconds later the left door closed pushbutton was activated. Based on the VMS data, there were no faults with the train that may have contributed to the cause of this incident. The Office of Rail Car Maintenance (CMNT) performed an inspection on all rail cars and determined no failures were observed between the VMS and subsystems.

The Office of Safety Investigation (OSI) conducted a fatigue risk analysis and post-incident interview with the Train Operator four days after the incident. No indications of fatigue were evident, the Train Operator reported no symptoms of fatigue in the time leading to the incident. During the interview, the Train Operator stated that when the train stopped on the platform they went to the window and opened the doors without having the train berthed at the 8-car marker.

On June 2, 2022, an RTRA Investigation determined that the Train Operator's actions displayed serious neglect for rules and with a record of unsafe behaviors. They were subsequently Disqualified from Rail Operations.

## Chronological Event Timeline

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

Time	Description
06:04:44 Hours	<u>Train ID 825</u> : I don't have any readouts. <u>ROCC RTC</u> : There is a train servicing the platform. Train ID 607, is everything alright? Train ID 607 track two Stadium come in to Central. Train ID 607 in approach to Potomac come in to Central. [Radio]
06:06:10 Hours	<u>ROCC RTC</u> : [RTRA Supervisor #1] come in with your location. <u>RTRA Supervisor #1</u> : Potomac Avenue. <u>ROCC RTC</u> : Have the train on track two contact ROCC. <u>RTRA Supervisor #1</u> : Acknowledged and repeated. [Radio]
06:06:45 Hours	<u>Station Manager</u> : A customer complained that the Train Operator opened the doors in the tunnel, closed the doors, then serviced the platform. <u>ROIC</u> : I'll pass the message on. [Phone]
06:06:55 Hours	<u>ROIC</u> : The Station Manager at Stadium-Armory reported that a customer said the Train Operator opened the doors in the tunnel, closed the doors, then serviced the platform. <u>ROCC RTC</u> : Okay. [Phone]
06:07:31 Hours	<u>Train ID 607</u> : This is 607, how do you copy? <u>ROCC RTC</u> : Anything wrong with your train, you're seven minutes behind schedule? <u>Train ID 607</u> : This is 607, how do you copy? <u>ROCC RTC</u> : Loud and clear, how do you copy Central? <u>Train ID 607</u> : This is 607, how do you copy? <u>ROCC RTC</u> : Train 607, try your handheld. [Radio]
06:08:35 Hours	<u>ROCC RTC</u> : Train ID 607, radio check. <u>Train ID 607</u> : Loud and clear. <u>ROCC RTC</u> : Train ID 607, anything wrong with your train, you're seven minutes behind schedule? <u>Train ID 607</u> : 607, 607 <u>ROCC RTC</u> : Train 607, try your handheld. <u>RTRA Supervisor #1</u> : I'll make my way to the operating car. I copy the train is behind schedule. <u>ROCC RTC</u> : Acknowledged. [Radio]
06:09:58 Hours	The Button RTC contacts and notifies the AOM of the report of Train ID 607 opening the doors in the tunnel, closing the doors, then servicing the platform at Stadium-Armory, track two. [Phone]
06:10:29 Hours	<u>RTRA Supervisor #1</u> : The Train Operator said that they're operating according to the SOP because they received an RWP violation last week, there's nothing wrong with the train. <u>ROCC RTC</u> : Can you take over operations? <u>RTRA Supervisor #1</u> : If I take over operations, I don't know what that would do. I'm already off the train. <u>ROCC RTC</u> : I'll get another Supervisor. [Phone]

Time	Description
06:12:32 Hours	<u>ROCC RTC</u> : [RTRA Supervisor #2], what's your location? <u>RTRA Supervisor #2</u> : Rosslyn. <u>ROCC RTC</u> : Give me a landline. <u>RTRA Supervisor #2</u> : Acknowledged and repeated. [Radio]
06:12:50 Hours	<u>ROCC RTC</u> : Train ID 607 in approach to L'Enfant come in to Central. <u>Train ID 607</u> : 607 in approach to L'Enfant Plaza, go with your message. <u>ROCC RTC</u> : Train ID 607, did you service Stadium-Armory and wasn't properly berthed? <u>Train ID 607</u> : Affirm. [Radio]
06:13:00 Hours	<u>ROCC OM</u> : Is 607 alright? They seem to keep losing time. <u>ROCC RTC</u> : The Train Operator said that they're operating according to the SOP because they received an RWP violation last week. [RTRA Supervisor #2] is giving a landline due to a report of the train opening the doors in the tunnel at Stadium-Armory. <u>ROCC OM</u> : The train was on the platform for four minutes at Stadium-Armory. Did you inform the AOM? <u>ROCC RTC</u> : Yes. <u>ROCC OM</u> : We'll pull the video on it. [Phone]
06:13:40 Hours	<u>ROCC RTC</u> : Head to track one and go to Farragut West, the Train Operator on 607 is down seven minutes. Also, we have a report of doors open outside the station at Stadium-Armory. Get off at Farragut West. <u>RTRA Supervisor #2</u> : Acknowledged and repeated. [Phone]
06:17:18 Hours	<u>ROCC RTC</u> : [RTRA Supervisor #2] standby Rosslyn, track two for the next train. <u>RTRA Supervisor #2</u> : Acknowledged and Repeated. [Radio]
06:24:07 Hours	<u>ROCC RTC</u> : Making notifications that the Train Operator is out of service. [Phone]

### Office of Radio Communications (COMR)

The Office of Radio Communications (COMR) conducted comprehensive radio checks (TX/RX) at Stadium-Armory Station and Potomac Avenue Station, tracks 1 & 2 and concluded all radio checks were loud and clear. No defective conditions were found.

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

As provided by the CMOR/Incident Investigation Team (IIT) from the downloaded VMS and ER, the following analysis is adopted as part of this report:

Based on VMS data, Train ID 607 entered Stadium-Armory Station platform limits at a speed of 9 MPH, with the Master Controller in a P2 position. The train came to a complete stop after entering 340 feet into the platform limits. This indicated that the train was not properly berthed on the platform and was 110 feet off the platform limits when the left side doors pushbutton was activated, and doors opened as commanded. The doors were cycle closed and opened a second time while still off the platform limits. The train moved an additional 251 feet and stopped 9 feet short from the 8-car marker, the left side doors were opened, and station was serviced. There were no faults observed with the train that may have contributed to the cause of this incident.

Sequence of events that occurred during the incident time.

TIME	SEQUENCE OF EVENTS	MC Position	Train Speed	Distance to 8-Car Marker
06:02:04.872	Train ID 607, lead rail car 3056 cab entered Stadium-Armory Station, track 2 platform limits.	P2	9MPH	
06:02:20.695	Train consist reached the center platform (4-Car marker).	B2	6MPH	300 feet
06:02:30.860	Train comes to a completed stop 340 feet into platform limits and 110 feet off the platform limits.	B5	0MPH	260 feet
06:02:50.268	Left door open pushbutton was activated, left side doors opened as commanded. DCKR de-energized.	B5	0MPH	260 feet
06:03:03.627	13.359 seconds later, left door closed pushbutton was activated, left side doors begin to close.	B5	0MPH	260 feet
06:03:11.496	DCKR energized. All doors are closed and locked.	B5	0MPH	260 feet
06:03:15.588	Left door open pushbutton was activated. Doors are open for the second time off the platform limits.	B5	0MPH	260 feet
06:03:26.328	Left door closed pushbutton was activated. Left side doors begin to close.	B5	0MPH	260 feet
06:03:34.480	DCKR energized. All doors are closed and locked.	B5	0MPH	260 feet
06:03:39.052	Master Controller is placed in "P5" position. Train begins to move.	P5	0MPH	260 feet
06:04:01.460	Train comes to a completed stop after traveling 251 feet, speed did not exceed 12MPH.	B5	12MPH	9 feet
06:04:05.393	Left door open pushbutton was activated, left side doors open. DCKR de-energized.	B5	0MPH	9 feet
06:04:30.872	Left side doors closed pushbutton was activated, left side doors begin to close.	B5	0MPH	9 feet
06:04:39.056	DCKR energized. Doors are closed and locked.	B5	0MPH	9 feet
06:04:46.156	Master Controller is placed in "P5". Train proceeds to the next station.	B5	0MPH	9 feet



06:02:04.872 Train entered platform limits. Master Controller "P2", Train speed 9Mph.

06:03:15.588 Left door open pushbutton was activated. Doors are open 2<sup>nd</sup> time off the platform.

06:03:39.052 Master Controller is placed in "P5". Train begin to move.

06:04:05.393 Left door pushbutton was activated. Left side doors open.

06:04:34.480 DCKR energized. Doors are closed and locked.

06:04:46.156 Master Controller is placed in "P5". Train proceeds to the next station

06:02:30.860 Train comes to completed stop. 340Feet into platform limits. Train is 110Feet off platform.

06:02:50.268 Left door open Pushbutton is activated. Left side door open.

06:03:11.496 DCKR energized. Doors are closed and locked.

06:04:01.460 Train stop after traveled 251Feet.

06:04:39.056 DCKR energized. Doors are closed and locked.

As provided by the Office of Car Maintenance (CMNT), the following analysis is adopted as part of this report:

Incident Date: 05/06/2022 Time: 06:03 hours  
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## Interview Findings

*As part of the investigation launched into the Stadium-Armory Station Improper Door Operation event, SAFE conducted one interview via Microsoft Teams, including the Investigations Team and the WMSC. The interview identified the following key findings associated with this event. Findings detailed below include reported information from interviews and may conflict with other data sources contained in the report.*

### Train Operator

- The Train Operator stated that they were heading to Stadium-Armory Station from Benning Road Station, operating according to the SOP.
- The Train Operator stated that when they stopped the train, they went to the left side window and opened the doors.
- The Train Operator stated they believed the full consist was on the platform.
- The Train Operator stated they were familiar with SOP 40 and that the train consist should stop at the eight-car marker.
- The Train Operator stated that they were cited for moving a train "a couple of feet," without having speed commands, the week preceding this incident.<sup>1</sup>

### Weather

On May 6, 2022, at the time of the incident, NOAA recorded the temperature as 60° F, Light Rain, low clouds. Stadium-Armory Station is located within the tunnel portion of the rail system. Weather was not a contributing factor in this incident (Weather source: NOAA – Location: Washington, DC)

### Human Factors

#### Fatigue

##### *Signs and Symptoms of Fatigue*

We evaluated conditions at the time of the incident 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 Train Operator reported feeling moderately alert at the time of the incident. The Train Operator reported experiencing no symptoms of fatigue in the time leading up to the incident.

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<sup>1</sup> Adopted from event E22236, On Wednesday, April 20, 2022, the Office of Rail Transportation (RTRA) Quality Assurance/Quality Control (QA/QC) Group conducted a Red Signal/Zero Speed Commands audit at Federal Center Station (D04), Track 2. D04-14 Turnback was used to simulate a red signal causing all operators to lose speed commands once they reached the 8-car marker of the platform at Federal Center Station. The audit was to examine the Train Operators' compliance with Metrorail Safety Rules and Procedure Handbook (MSRPH) Operating Rules (OR) 3.69 and Permanent Order (PO) T-20-28, which permanently modifies OR 3.79. Specifically, the Train Operators' procedures when losing speed commands.

## *Fatigue Risk*

The incident data was evaluated for fatigue risk factors. Risk factors for fatigue were not present. Since fatigue evidence and risk factors were not present, 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 was not in violation of the Drug and Alcohol Policy and Testing Program 7.7.3/6.

## **Related Rules and Procedures**

- MSRPH SOP #40 Door Operations/Station Servicing Procedures
- MSRPH, General Rule 1.32, *Employees involved in, witnessing, or informed of an accident or incident, to include near misses, on the Metrorail System shall inform their supervisor, Transit Police, ROCC and/or other appropriate authority as soon as possible, and shall file a written report.*
- MSRPH, General Rules 1.46, *Employees shall not permit unnecessary conversation, reading, lounging or any other action or condition of mind to divert their attention from the safe and efficient performance of duty.*
- MSRPH Operating Rule 3.120, *In revenue service, Train Operators shall not manually operate any OPEN DOORS control except the crew door key switch while any side doors of the train are outside the limits of a station platform, except when directed by ROCC.*

## **Findings**

- The Train Operator properly serviced the four stations prior to Stadium-Armory, stopping at the eight-car marker.
- At Stadium-Armory Station, Train ID 607 stopped at the four-car marker, with two cars approximately 110 feet off the platform limits, when the left side doors pushbutton was activated.
- The train doors were cycled closed and opened a second time while the consist was still outside of the platform limits.
- The train moved an additional 251 feet and stopped 9 feet short from the 8-car marker, the left side doors were opened, and station was serviced.
- The Train Operator did not report the incident to ROCC.
- No fatigue elements were identified as contributory to the actions of the Train Operator.
- Train Operator was cited on April 20, 2022, for Improper Vehicle Movement at Federal Center SW Station.

## **Immediate Mitigation to Prevent Recurrence**

- The Office of Rail Transportation Rail Supervisor took over operation of the train at Rosslyn Station.
- The Office of Rail Transportation removed the Train Operator from service for post-incident toxicology testing.



- Train ID 607 was removed from service for post-incident inspection.
- On June 2, 2022, an RTRA Investigation determined that the Train Operator's actions displayed serious neglect for rules and with a record of unsafe behaviors. They were subsequently Disqualified from Rail Operations.

### **Probable Cause Statement**

The probable cause of the Improper Door Operation event was a lapse in attention by the Train Operator when they failed to perform their duties as outlined in the MSRPD and neglected to pay full time attention to their position on the platform, prior to operating the platform-side doors. An additional contributing factor was ineffective oversight of the Train Operator, as this was the second significant violation by them within a three-week period. On April 20, 2022, the Operator was cited for moving their train without speed commands.

### **SAFE Recommendations/Corrective Actions**

<b>Corrective Action Code</b>	<b>Description</b>	<b>Responsible Party</b>	<b>Due Date</b>
100115_SAFE CAPS_RTRA_001	RTRA to perform an evaluation of the Train Operator to determine fitness for duty.	RTRA	Completed
100115_SAFE CAPS_RTRA_002	RTRA must provide consistent supervisory oversight and effective training and safety promotion to ensure that personnel follow all rules and procedures, document compliance with rules and procedures, and ensure that the “just culture” and other principles embodied in the safety management system Metrorail has committed to in its Public Transportation Agency Safety Plan (PTASP) are implemented.	RTRA	Ongoing

## **Appendices**

### **Appendix A – Interview Summary**

#### **RTRA - Train Operator**

The Train Operator is a WMATA employee with 15 years of service and 5 years of experience as a Train Operator. The Train Operator holds a Roadway Worker Protection (RWP) Level 2 certification that expires in January 2023. The Train Operator successfully completed Train Operation Certification in March 2020.

*The narrative below summarizes the interview with SAFE and represents the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.*

During the virtual interview, the Train Operator stated that on the day of the incident, they arrived on duty at approximately 04:45 hours, collected their manifest, conducted preliminary radio checks and secured their six-car train to begin their run on the Silver Line. The Train Operator stated that they were operating within their first trip and had no issues with the train.

The Train Operator stated they were on the way to Stadium-Armory Station from Benning Road Station, operating according to the SOP. The Train Operator stated that they slowed down while approaching the station. The Train Operator stated that when they stopped the train, they opened the doors. The Train Operator stated they initially believed the full consist was on the platform. The Train Operator stated they were uncertain exactly where the train was stopped in relation to the six-car marker, and they believed they entered the station at no more than 37 MPH.

The Train Operator stated the ROCC contacted them at L'Enfant Plaza Station. The Train Operator stated they were familiar with SOP 40 and that the train consist should stop at the eight-car marker. The Train Operator stated they loved being a Train Operator and they have no complaints.

The Train Operator stated that their most recent medical review occurred in November of 2021. The Train Operator stated that they had no medical issues to include sleep apnea. The Train Operator stated that they had previously had sleep apnea, and no longer suffered from the condition after losing weight.

The Train Operator stated that they received a violation for moving a train "a couple of feet," without having speed commands, the week preceding this incident.

## Appendix B – Train Operator Certification



### TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION



Name:	[Redacted]	Emp. No.:	[Redacted]	Division:	Large	Date:	3/12/2020
-------	------------	-----------	------------	-----------	-------	-------	-----------

Reason for Certification: Please place a check in an area below.		Training Time Received: Please record training time in an area below.	
<input type="checkbox"/> Certification: Student	<input type="checkbox"/> Pre-certification: Student	<input type="checkbox"/> Division Request	
<input checked="" type="checkbox"/> Re-Certification	<input type="checkbox"/> Return to Duty	<input type="checkbox"/> Other	
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	Equipment / PPE (current/working condition)	Yes	No
MSRPH version #:	84 %	3/12/2020	MSRPH	✓	
TVOIM	87 %	3/12/2020	Perm/Temp/Special Orders	✓	
Supervisor General	%		Troubleshooting Guide	✓	
Practical attempt #:	OL: 1	3/12/2020	Flashlight	✓	
			Safety Vest	✓	
			Footwear	✓	
			Identification (WMATA, RWP)	✓	

Corrective Actions Required	Date Due	Complete	Initials

Forwarded to:	Date:
---------------	-------

Certification Information: To be completed by DA Staff		Signatures:		Date:
Emp. No.:	[Redacted]	Date of Birth:	2/19/1950	
Date Last Qualified:		Certification Class:		
Due Date Next Qualification:		Corrective Lenses:		
Date Qualification Expires:		Restrictions:		
		Employee:	[Redacted]	3/12/2020
		Examiner:	[Redacted]	3/12/2020
		Reviewed by:	[Redacted]	

Document 1 – Train Operator Certification, dated 03/12/2022 – Page 1 of 2

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Drafted By: SAFE 707 – 07/03/2022  
Reviewed By: SAFE 71 – 07/05/2022  
Approved By: SAFE 71 – 07/06/2022

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION (continuation sheet) Emp No. [REDACTED] Date: 3/12/2020

CATEGORIES / SUBCATEGORIES	QUALITY LEVEL	REMARKS (Remarks are required for a quality level score of 2 or 3)
<b>I. Preparation for Service</b>		
1. Exterior Inspection	1	Cars Used: 3050 + 3067
2. Interior Inspection - Trailing Cab	1	Rate line 3051 - Ave Control Valve 3067 - Truck c/b 3050
3. Interior Inspection - Each Car	1	Sealed switch 3051 - Train line c/b 3067
4. Interior Inspection - Operating Cab	1	prop c/b 3066
5. Rolling Test / Rolling Brake Test	1	Time Allotted: 30:00 / Actual Time: : 24
<b>II. Mainline Operation</b>		
6. Communications	1	
7. Door Operation and Station Stopping	1	
8. Use of Horn	1	
9. Speed Adherence - Manual Operation	1	
10. Turn Back Moves	1	Location: D11 Time Allotted: 03:00 / Actual Time: : 3
11. Manual Route Selection	1	Location: D13
12. EV Shutoff	1	Time Allotted: 01:00 / Actual Time: : 1 min
<b>III. Yard Operation</b>		
13. Communications	1	
14. Yard Movements	1	
15. Coupling	1	Time Allotted: 08:00 (12) / Actual Time: : 7 Cars Used: 3050 + 3070
16. Uncoupling	1	Time Allotted: 05:00 (7.5) / Actual Time: : 4 Cars Used: < 3070 > 3050
17. Isolation	1	Time Allotted: 05:00 (7.5) / Actual Time: : 4 Cars Used: 3050 + 3067
18. Manual Switch Operation	1	Switch 10
<b>IV. Miscellaneous</b>		
19. Recovery Train Operation	1	Time Allotted: 10:00 (15) / Actual Time: : 8 Cars Used: 3070 + 3050 + 3067
20. Troubleshooting problem 1	1	Master Control c/b 50sec # 3071.
problem 2	1	Door Malfunction 5min # 3050 Door #1

Rev. January 15, 2017 - RTA QA/QC

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION

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Drafted By: SAFE 707 - 07/03/2022  
Reviewed By: SAFE 71 - 07/05/2022  
Approved By: SAFE 71 - 07/06/2022

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## Appendix B – RTRA Rail Supervisor Daily Activity (RSDAR) Report

SubmissionID	EmpID	ReportDate	FirstName	LastName	Division	TrainID	BoardingLocation	BoardingTime	TrainAnno	Unsatisfac	StationSto	Unsatisfac	DoorOper	Unsatisfac	HeadwayA	Unsatisfac	ATOManu
447000	9451	3/13/2022	Lamont	Russell	Largo	999	C07 - Pentagon	1:30 PM	Yes				Yes				Yes
451702	9451	3/27/2022	Lamont	Russell	Largo	601	C02 - McPherson Sq.	2:10 PM	Yes		Yes		Yes		Yes		Yes
460722	9451	4/15/2022	Lamont	Russell	Largo	606	K05 - East Falls Church	9:47 AM	Yes		Yes		Yes		Yes		Yes
461664	9451	4/17/2022	Lamont	Russell	Largo	607	N06 - Wiehle-Reston East	12:07 PM	Yes				Yes				Yes
469584	9451	5/4/2022	Lamont	Russell	Largo	602	N06 - Wiehle-Reston East	10:49 AM	Yes		Yes		Yes		Yes		
470611	9451	5/6/2022	Lamont	Russell	Largo	607	D07 - Potomac Ave	6:08 AM	Yes				Yes				Yes
Unsatisfac	UniformAr	Unsatisfac	PersonalPi	Unsatisfac	RadioCom	Unsatisfac	Procedure	Departing	DepartTim	GeneralComments							TrainInSvc
							Train Annc	C08 - Pent	1:32 PM	Made clear and concise announcements							FALSE
							Door Ops/	C05 - Ross	2:18 PM								FALSE
							Door Ops/	K04 - Balls	9:50 AM								FALSE
							Reporting	N06 - Wie	12:14 PM								FALSE
							Door Ops/	N01 - Mcl	11:03 AM								FALSE
							Zero Speed	D05 - Capi	6:11 AM	Discussed do not move train with zero speed commands							FALSE

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Approved By: SAFE 71 – 07/06/2022

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## Appendix C – RTRA Investigative Report



### WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

<b>Investigation Report</b>		DIVISION Largo	GARAGE N/A	FILE NO.	
DATE OF OCCURRENCE May 6, 2022		TIME 6:03AM	VEHICLE NO. 3056 Lead Car	RUN # 500205	BLOCK NO. 607
LINE Silver	LOCATION Stadium-Armory Track #2			DESTINATION Wiehle-Reston East	
TYPE OF CASE: G. R. 1.46, O.R. 3.1, 3.79, and S.R.4.1				REPORTED BY A customer riding the train	
NAME OF EMPLOYEE INVOLVED Train Operator [REDACTED]			EMPLOYEE NO. [REDACTED]		
NATURE OF OCCURRENCE Doors opened outside the platform limits / Improper Door Operation					
1. SUMMARY OF INVESTIGATION 2. STATEMENT OF EMPLOYEE 3. SUMMARY OF VIOLATION. 4. ANALYSIS OF FACTS / EVIDENCE IN SUPPORT OF RULE VIOLATION 5. ASSESSMENT OF DISCIPLINE					
<p>1. On Friday, May 6, 2022, at 6:03am, Operator [REDACTED] operated train ID 607 into Stadium-Armory platform on track #2. Operator [REDACTED] stopped his train approximately 340 feet on the platform and opened the train doors on the platform side while 110 feet of his train was still in the tunnel. Operator [REDACTED] then adjusted his train to properly berth at the eight-car marker, opened the train doors on the platform side and serviced the station. After servicing Stadium-Armory, Operator [REDACTED] continued to the next station and did not report the occurrence to ROCC. The report of the occurrence was made by a customer who exited the train and reported to an on-duty Station Manager at Stadium-Armory who then reported the occurrence to ROIC (Rail Operations Information Center). Operator [REDACTED] was removed from service for post-incident testing pending a full investigation.</p> <p>2. Operator [REDACTED] you were instructed to complete an incident report and you stated in your report, "As I pulled into the station a little past mid platform, I serviced the station. Once I noticed I was not at the eight-car marker, but all my cars were on the platform I adjusted and serviced the station a second time. I continued not noticing I did anything wrong until Supervisor [REDACTED] took me out of service."</p>					
ACTION TAKEN 24-Month Disqualification					
DATE 6/2/2022		ACTION TAKEN BY: SIGNATURE: [REDACTED]		TITLE: Assistant Superintendent	
EMPLOYEE SIGNATURE [REDACTED]					
I certify that the above has been called to my attention, and that I understand that my signature does not imply admission of guilt.					
EMPLOYEE MAY WRITE A STATEMENT IN THIS SPACE					

Document 3 – RTRA Investigative Report, dated June 2, 2022 – Page 1 of 3

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Drafted By: SAFE 707 – 07/03/2022  
Reviewed By: SAFE 71 – 07/05/2022  
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**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY  
CONTINUATION INVESTIGATION REPORT**

3. Operator [REDACTED] you are in direct violation of the following rule/regulation and Permanent Order

*Permanent Order T-20-28 and Operating Rules:*

*GR 1.46 Employees shall not permit unnecessary conversation, reading, lounging or any other action or condition of mind to divert their attention from the safe and efficient performance of duty*

*OR 3.120 In revenue service, Train Operators shall not manually operate any OPEN DOORS control except the crew door key switch while any side doors of the train are outside the limits of a station platform, except when directed by ROCC.*

*OR 3.1 Customer safety is the responsibility of every WMATA employee; however, Train Operators have the ultimate and final responsibility for the safety of the customers on their particular trains. If any Train Operator is instructed by any person, regardless of rank, title, or position, to take any action which would adversely affect the safety of customers, the operator shall stop the train, notify ROCC or the Interlocking Operator, and shall not continue until satisfied that it is safe to do so*

*OR 3.79.1 Upon losing speed commands on the platform, the operator may NOT adjust the train in the same direction of traffic to service the station without contacting ROCC or terminal supervisor for permission. After servicing the station, the operator must keep their train doors open, until such time when the operator has received speed commands, a proper signal aspect, (Lunar or Flashing) along with contacting the ROCC or terminal supervisor for permission to leave and an absolute block for the move if speed commands do not return. (Reference SOP (Standard Operating Procedure) 40)*

*4.1 Employees shall immediately report hazardous and/or unsafe conditions to their supervisor, including all near misses.*

4. Operator [REDACTED] an investigation of this incident included your incident report, statements made by you during your interview with Assistant Superintendent [REDACTED] and data analyzed from your lead car 3056. The Incident Investigation Team (IIT) Engineers analyzed the data retrieved from Train ID 607 lead car 3056 and provided this data to RTRA Management. The data provided revealed that train ID 607 entered Stadium-Armory platform limits at a speed of 9MPH, with the Master controller in "P2" position. The train came to a complete stop after it entered 340 feet into platform limits. The train was not properly berthed on the platform and was 110 feet off the platform limits when the left side Doors Open button was activated, and doors opened as commanded. Train ID 607 doors were cycled closed and opened a second time while still off the platform limits. Train ID 607 moved for an additional 251 feet and stopped nine feet short of the 8-car marker. The left side doors were opened, and station was serviced. There were no faults observed with the train that may have contributed to the cause of this incident. The video displayed Operator [REDACTED] placing his head out of the window on the platform side of the train while the doors where opened.

Operator [REDACTED] by your own admission, you were operating train ID 607 and stopped short of the eight-car marker within the platform limits at Stadium-Armory when you serviced the platform. Upon noticing you were not at the eight-car marker, you then closed the doors of the train and moved to the eight-car marker and re-opened the doors. This all took place without contacting ROCC. You went on to say that all your cars were on the platform when the doors opened the first time, and you did not know that anything was wrong until you were removed from service by Supervisor [REDACTED]

Operator [REDACTED] door operations are a critical safety function for Train Operators. As a Train Operator, it is your responsibility to ensure customers are always able to board and exit the train safely. When the train doors are not operated properly, it increases the possibilities for unforeseen occurrences. WMATA has provided guidelines, policies, and procedures concerning door operations while in revenue service. According to the rules and permanent orders stated above you have failed to comply with established rules and regulations.

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**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY  
CONTINUATION INVESTIGATION REPORT**

5. Operator [REDACTED] in determination of appropriate disciplinary penalty for this case, a review of your record was conducted. The record indicates you have been with the Authority since December 2, 2007. You became a Train Operator April 5, 2014. Your operational record reflects that you were involved in other safety related incidents beginning with a red signal overrun in a rail yard dated October 30, 2014, a failure to sound your horn dated August 27, 2014, and moving the train without speed commands on April 20, 2022, in which you served a 2-day suspension and accumulated 13 points under the (DAP) Disciplinary Administration Program. There are also several station overruns on your record: May 1, 2018, June 19, 2015, February 9, 2015, October 2, 2014, October 2, 2014, and June 12, 2014.

Your record demonstrates a serious neglect for rules and safety protocols. Operator [REDACTED] this current infraction does not meet a Level 3 Safety/Operational violation however, your record of operational practices demonstrates unsafe behaviors. Consequently, you are being disqualified from train operations for a period of 24-months. Effective immediately, you will be referred to the Bus Training Department to assume your previous position as a Bus Operator and because you do not have a valid Commercial Driver License or DOT (Department of Transportation) card as required to return to BUS, you are being referred to consult with the 689 Amalgamated Transit Union. representation for further discussions on how to return to BUS upon receiving the proper credentials to Operate Metro Bus. All questions and or concerns following the effective date of this discipline will need to be addressed by the 689 Amalgamated Transit Union.

EMPLOYEE NAME [REDACTED]

Payroll # [REDACTED]

DATE: 6/2/22

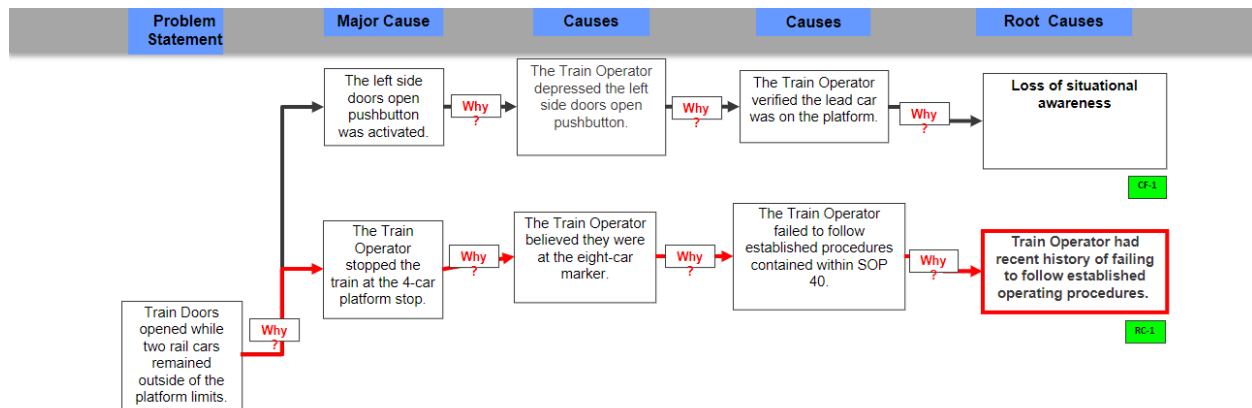
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Drafted By: SAFE 707 – 07/03/2022  
Reviewed By: SAFE 71 – 07/05/2022  
Approved By: SAFE 71 – 07/06/2022

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## Appendix D – Root Cause Analysis



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### Root Cause Analysis

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

