



**WMSC Commissioner Brief: W-0115 – Collision, Customer Fatality – Near Rhode Island Ave Station – June 6, 2021**

*Prepared for Washington Metrorail Safety Commission meeting on October 26, 2021*

**Safety event summary:**

A Red Line train struck a person on the roadway. The train operator did not make an attempt to stop the train prior to the collision. Following the collision, the Train Operator briefly stopped the train, reported hearing a noise, then continued on. The Train Operator of the following train approaching Rhode Island Ave Station identified that the person was on the roadway with a head injury. The person did not survive.

CCTV shows the person entering the Rhode Island Ave Station, walking toward the platform end gate, then entering the roadway by jumping onto the track bed. The person then walked down the tracks toward Brookland Station. Forward-facing video from the train shows the person was walking toward the train in the area next to the elevated catwalk. The person was attempting to get back onto the catwalk about 644 feet from the station platform as the train struck them at 4:43 p.m. The train was moving approximately 35.5 mph.

The Train Operator applied emergency braking just after striking the person, The train had moved approximately 50 feet beyond the collision when braking was applied. The train stopped approximately 10 seconds after striking the person, approximately 270 feet after emergency braking was applied. The train stopped approximately 324 feet from the station platform. The Train Operator looked out the window to determine whether there was any noticeable damage.

As noted, the Train Operator did not report striking a person to the Rail Operations Control Center (ROCC). The Train Operator reported hearing a loud noise, and asked for a following train to perform a track inspection. The Train Operator proceeded approximately 42 seconds after the train stopped, berthed at the station platform, and serviced the station. At the station, the operator again looked out of the train to assess whether there was any noticeable damage.

The following train reported the person in the roadway approximately 13 minutes after the person was struck.

**Probable Cause:**

The probable cause of this event was that a Metrorail customer entered the roadway without permission, and Metrorail personnel did not identify the hazard.

**Corrective Actions:**

Metrorail did not develop any corrective actions in response to this event.

**WMSC staff observations:**

Due to the initial report, the Train Operator should have been directed to do a ground walkaround to confirm whether it was safe to move the train to the station.

Metrorail may consider additional efforts or protections to communicate the risks of entering the roadway to customers, such as additional warnings.

**Staff recommendation:** Adopt final report.



Washington Metro Area Transit Authority  
Department of Safety and Environmental  
Management (SAFE)  
FINAL REPORT OF INVESTIGATION A&I E21232

<b>Date of Event:</b>	06/06/2021
<b>Type of Event:</b>	Collision
<b>Incident Time:</b>	16:43 hours.
<b>Location:</b>	CM B2-171+00
<b>Time and How received by SAFE:</b>	17:06 hours. SAFE On-Call Phone
<b>WMSC Notification Time:</b>	18:35 hours.
<b>Responding Safety Officers:</b>	WMATA: No WMSC: No Other: No
<b>Rail Vehicle:</b>	Train ID 108 [L7474-7475.7461-7460.7284-7285.7463-7462T],
<b>Injuries:</b>	Fatality
<b>Damage:</b>	No
<b>Emergency Responders:</b>	DCFEMS, MTPD, RTRA, ERT and CMNT
<b>SMS I/A Incident Number:</b>	20210606#93707MX

CM B2 - 171+00  
Collision  
June 06, 2021  
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## Abbreviations and Acronyms

<b>AIMS</b>	Advanced Information Management System
<b>ARS</b>	Audio Recording System
<b>CCTV</b>	Closed-Circuit Television
<b>CID</b>	Crime Investigation Departments
<b>CM</b>	Chain Marker
<b>CMOR</b>	Office of Chief Mechanical Officer
<b>COMM</b>	Office of Systems Maintenance Communication Section
<b>CSS</b>	Crime Scene Search
<b>DCFEMS</b>	District of Columbia Fire Emergency Medical Services
<b>DCOCME</b>	District of Columbia Office of Chief Medical Examiner's Office
<b>EMS</b>	Emergency Medical Services
<b>ETS</b>	Emergency Trip Systems
<b>ERT</b>	Emergency Response Team
<b>ESR</b>	Event Scene Release
<b>FSB</b>	Full Service Brake
<b>IC</b>	Incident Commander
<b>IIT</b>	Incident Investigation Team
<b>IMO</b>	Incident Management Official
<b>MC</b>	Master Controller
<b>MOC</b>	Maintenance Operations Control
<b>MSRPH</b>	Metrorail Safety Rules and Procedures Handbook
<b>MTPD</b>	Metro Transit Police Department
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>OSC</b>	On-Scene Commander
<b>PA</b>	Public Address
<b>ROCC</b>	Rail Operations Control Center
<b>RTC</b>	Rail Traffic Controller
<b>RTRA</b>	Office of Rail Transportation
<b>SAFE</b>	Department of Safety and Environmental Management
<b>SMS I/A</b>	Safety Measurement System Incidents/Accidents
<b>SOP</b>	Standard Operating Procedure
<b>TL</b>	Trainline
<b>TOC</b>	Transportation Operations Center
<b>VMDS</b>	Vehicle Monitoring and Diagnostic System
<b>WMATA</b>	Washington Metropolitan Area Transit Authority
<b>WMSC</b>	Washington Metrorail Safety Commission

## **Executive Summary**

On Sunday, June 6, 2021, at approximately 16:46 hours, a Train Operator operating Red Line Train ID 108 [L7474-7475.7461-7460.7284-7285.7463-7462T], in Rhode Island Avenue Station's direction notified the ROCC Radio Rail Traffic Controller (RTC), stating that they heard an unidentified loud noise. Train ID 108 Train Operator reported they did not see anything unusual during their visual inspection and requested the next train en route to the Rhode Island Avenue Station, Track 2, conduct a track inspection. Based on the Audio Radio System (ARS) playback review, Train ID 109 Train Operator, the train behind Train ID 108, reported they located a person lying down between the running rail and the catwalk at Chain Marker (CM) B2 171+00 and had an apparent head injury.

The District of Columbia Fire Emergency Medical Services (DCFEMS), Metro Transit Police Department (MTPD), Department of Safety and Environmental Management (SAFE), and the Office of Rail Transportation (RTRA) Supervisors were dispatched to the incident location. Based on ARS playback, at 17:02 hours, the ROCC Radio RTC complied with Standard Operating Procedure (SOP) 1A per the Metrorail Safety Rules and Procedures Handbook (MSRPH) when they assigned the RTRA Supervisor who was on Train ID 109 as the On-Scene Commander (OSC). Based on the Advanced Information Management System (AIMS) playback, the ROCC de-energized third rail power at Rhode Island Avenue Station, Track 2 to CM B2-173+00 at 17:04 hours. The ROCC granted the RTRA Supervisor permission to key down Train ID 109, escort MTPD to the incident scene from Rhode Island Avenue Station, Track 2, under Foul Time (FT) protection. At 17:10 hours, the RTRA Supervisor notified the ROCC Radio RTC and reported the person was unconscious, showing no signs of life.

Based on the Office of Chief Mechanical Officer (CMOR) / Incident Investigation Team (IIT) post-incident analysis, the Vehicle Monitoring and Diagnostic System (VMDS) data revealed Train ID 108 departed Brookland Station, Track 2 at 16:42 hours. At 16:43 hours, Train ID 108 made contact with the person on the roadway with a train speed of 35.54 mph and 644 feet away from Rhode Island Avenue Station, Track 2 platform limits. Train ID 108 came to a complete stop 270.68 feet after initiating an emergency brake and was 324.05 feet away from Rhode Island Avenue Station, Track 2 platform limits. Based on the CMOR IIT post-incident analysis, there was no data to support any anomalies with the consist that may have contributed to this incident.

The MTPD report revealed that at approximately 16:58 hours, MTPD Communications received a call for service from ROCC, stating that a person was on the roadway and was unconscious at Rhode Island Avenue Station. It was later determined that the person had been struck by a train that was no longer on the scene. MTPD, MTPD Crime Investigation Departments (CID), MTPD Crime Scene Search (CSS), and DCFEMS responded to the scene and located the person on the roadway at CM B2-171+00 showing no signs of life. DCFEMS pronounced the person deceased at 17:30 hours. The District of Columbia Office of Chief Medical Examiner's Office (DCOCME) was notified at 17:36 hours to respond to the scene. At approximately 18:40 hours, DCOCME arrived on the scene. The MTPD report revealed that the person suffered a severe head injury. MTPD reported that a review of the Rhode Island Avenue Station video revealed that at 16:37 hours, the person entered Rhode Island Avenue Station, walked up to the platform, and approached the north side end gate on the Shady Grove Station side of the platform. At 16:40 hours, the person jumped down onto the roadway and walked toward the Brookland Station, Track 2. At 16:43 hours, the person made contact with Train ID 108. The camera view does not capture

how the person was struck, as the camera was not zoomed in at the time. MTPD reported that a review of Train ID 108 front-facing video revealed the person walking head-on with the train, outside of the running rails near the catwalk, while the train was approaching the Rhode Island Avenue Station. The person appeared to attempt to jump back on the catwalk as the train made contact with them. There are no other camera views after that point. The cab camera view of the Train Operator appeared to show that Train ID 108 Train Operator was not distracted at the time of the collision event. See Appendix B.

Based on ARS playback, at 20:05 hours, Emergency Response Team (ERT) personnel notified the ROCC and reported that clean-up efforts were complete at CM-B2-171+00 and deemed the track's infrastructure elements and area safe for rail vehicle movement. The ROCC resumed regular rail service at 20:23 hours.

After reviewing the ARS, there did not appear to be any communication deficiencies over the radio. The On-Call Safety Officer notified the Transportation Operations Center (TOC) on June 6, 2021, at 18:35 hours, via email. Additionally, SAFE's Incident Management Official (IMO) notified the Washington Metropolitan Safety Commission (WMSC) and obtained an Event Scene Release (ESR) on Sunday, June 6, 2021, at 17:32 hours.

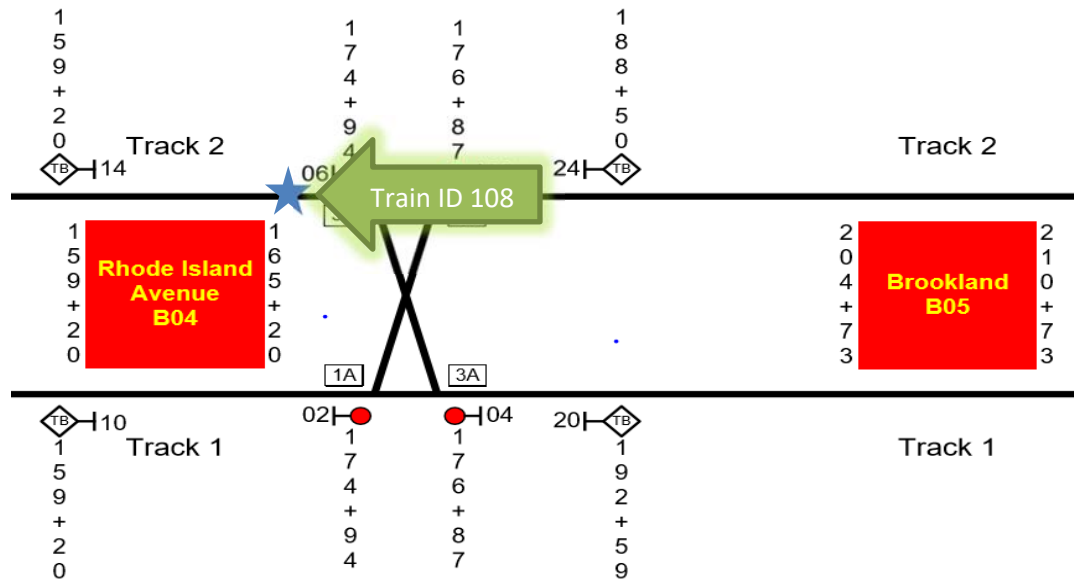
The probable cause of this collision event was the intentional actions of the person entering the rail right-of-way without authorization for an unknown reason. As Train ID 108 approached the Rhode Island Avenue Station, the person fouled the dynamic envelope of the train and appeared to attempt to jump back on the catwalk before being struck by Train ID 108, Lead Car 7474. Based on Train ID 108's front-facing video, the environmental conditions were favorable and showed a clear day with good visibility. The person appeared in the front-facing video line of sight for approximately three seconds before the train made contact with the person on the roadway. However, during the virtual interview, the Train ID 108 Train Operator was unaware of a person on the roadway. The Train Operator reported that while passing the Rhode Island Avenue Station interlocking, they made their observation for a lunar signal and heard a loud noise. The Train ID 108 Train Operator stated they immediately placed the MC in the emergency position, stuck their head out the window, and did not see anything unusual during their visual inspection. The Train Operator notified the ROCC and requested the next train en route to the Rhode Island Avenue station conduct a track inspection based on the loud noise they heard. The ROCC instructed the Train ID 108 Train Operator to proceed on Rhode Island Avenue Station platform without performing a ground walk around after they reported no troubles were displaying on their console and the Train Operator found nothing during their visual inspection. The person being struck by Train ID 108 appeared to be accidental as the MTPD report revealed that the camera view in the cab area of the Train Operator appeared to show that the operator was not distracted at the time of the collision event.

After an analysis of data collected from systems of record and interviews with staff and MTPD's incident report review, SAFE concludes there were no safety deficiencies related to any WMATA station facility, vehicle, or human factor components identified as contributors to this event.

## **Incident Site**

Chain Marker (CM) B2-171+00

## Field Sketch/Schematics



## Purpose and Scope

The purpose of this incident 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.

## Investigation Methods

The investigative methodologies included the following:

- Formal Interview – SAFE conducted one interview as part of this investigation. The interview included:
  - Train Operator
- Informal Interviews – Collected through conversations with individuals during the investigation to provide background and supporting information.
- Documentation Review – A collection of relevant work history information and process documentation in Metro systems of record. These records include:
  - Employee Training Procedures & Records
  - Certifications
  - The 30-Day Work History
  - Metrorail Safety Rules and Procedures Handbook (MSRPH)
  - National Oceanic and Atmospheric Administration (NOAA)
  - Rail Operations Control Center (ROCC) Procedures Manual
  - Office of Systems Maintenance Communication Section (COMM)
  - Office of Chief Mechanical Officer (CMOR) / Incident Investigation Team (IIT) post-incident analysis data
  - Office of Car Maintenance (CMNT) post-incident inspection data
  - Metro Transit Police Department (MTPD) executive briefing report



- Maximo
- System Data Recording Review – A collection of information contained in Metro Data Recording Systems. This data includes:
  - Audio Recording System (ARS) playback [Radio and Phone Communications]
  - Advanced Information Management System (AIMS) playback
  - Closed Circuit Television (CCTV)

## **Investigation**

On Sunday, June 6, 2021, at approximately 16:46 hours, a Train Operator operating Red Line Train ID 108 [L7474-7475.7461-7460.7284-7285.7463-7462T], in Rhode Island Avenue Station's direction notified the ROCC RTC, stating that they heard an unidentified loud noise. Train ID 108 Train Operator reported they did not see anything unusual during their visual inspection and requested the next train en route to the Rhode Island Avenue Station, Track 2, conduct a track inspection. Upon further investigation, Train ID 109 Train Operator, the train behind Train ID 108, reported they located a person lying down between the running rail and the catwalk at CM B2 171+00 and had an apparent head injury.

## **Audio Recording System (ARS) Chronological Event Timeline**

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

<b>Time</b>	<b>Description</b>
16:43:45 hrs.	<u>Train ID 108 Train Operator</u> : Notified the ROCC Radio RTC and reported they were on Track 2, approaching Rhode Island Avenue Station, and requested Train ID 109 that was behind them perform a track inspection. Train ID 108 Train Operator stated they heard a loud noise and didn't know what it was. [Ops 1]
16:46:00 hrs.	<u>Train ID 108 Train Operator</u> : Notified the ROCC Radio RTC and reported the loud noise probably was a bird and that they didn't see any visual damage to the front of the train. <u>ROCC Radio RTC</u> : Acknowledged. [Ops 1]
16:56:52 hrs.	<u>Train ID 109 Train Operator</u> : Notified the ROCC Radio RTC and reported that a person was in the roadway at Chain Marker (CM) B2-171+00 in approach to Rhode Island Avenue Station. Train ID 109 Train Operator indicated that it might be a recovery operation, and the person had an injury to the head. <u>ROCC Radio RTC</u> : Responded, did the train make contact with the person. <u>Train ID 109 Train Operator</u> : Responded; no, the person just looks unconscious. <u>ROCC Radio RTC</u> : Acknowledged. [Ops 1]
16:58:01 hours,	<u>ROCC Radio RTC</u> : Notified Train ID 109 Train Operator and instructed them to make announcements to their customers and reverse ends. [Ops 1]



<b>Time</b>	<b>Description</b>
17:02:36 hrs.	<u>ROCC Radio RTC</u> : Notified the RTRA Supervisor and appointed them as the OSC and indicated SOP 1A is in effect. <u>RTRA Supervisor</u> : Acknowledged and indicated MTPD was on the scene at Rhode Island Avenue Station. <u>ROCC Radio RTC</u> : Acknowledged and appointed the RTRA Supervisor as the RTRA Forward Liaison. [Ops 1]
17:06:16 hrs.	<u>RTRA Supervisor</u> : Notified the ROCC Radio RTC and confirmed third rail power was de-energized at CM-B2-171+00. <u>ROCC Radio RTC</u> : Acknowledged and instructed the RTRA Supervisor that under FT protection, they had permission to escort MTPD to the incident scene. [Ops 1]
17:10:41 hrs.	<u>RTRA Supervisor</u> : Notified the ROCC Radio RTC and reported the person was unconscious, showing no signs of life. [Ops 1]
19:29:28 hrs.	<u>RTRA Supervisor</u> : Notified the ROCC Radio RTC and reported that the emergency responder arrived on the scene and recovered the person from the roadway onto the Rhode Island Avenue Station platform. [Ops 1]
20:05:55 hrs.	<u>ERT</u> : Notified the ROCC Radio RTC and reported that the hazmat at the incident scene had been cleaned up. All personnel and equipment were clear of the roadway at Rhode Island Avenue Station, Track 2. TRST performed a good track inspection, and the roadway is deemed safe for train movement. [Ops 1]
20:20:19 hrs.	<u>RTRA Supervisor</u> : Notified the ROCC Radio RTC and reported that MTPD departed the scene and transferred the scene to RTRA. <u>ROCC Radio RTC</u> : Acknowledged and asked if it is safe to restore third rail power. <u>RTRA Supervisor</u> : Responded, all personnel and equipment are clear of the roadway, and tracks were safe to restore third rail power for train movement. <u>ROCC Radio RTC</u> : Acknowledged. Third rail power breakers were remotely commanded closed, and third-rail power was restored at Rhode Island Avenue Station, Track 2. [Ops 1]
20:23:44 hrs.	<u>ROCC Radio RTC</u> : Notified Train ID 110 Train Operator and reported normal service is resumed, and you are the first train to continue in regular service. [Ops 1]

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

## Advanced Information Management System (AIMS)

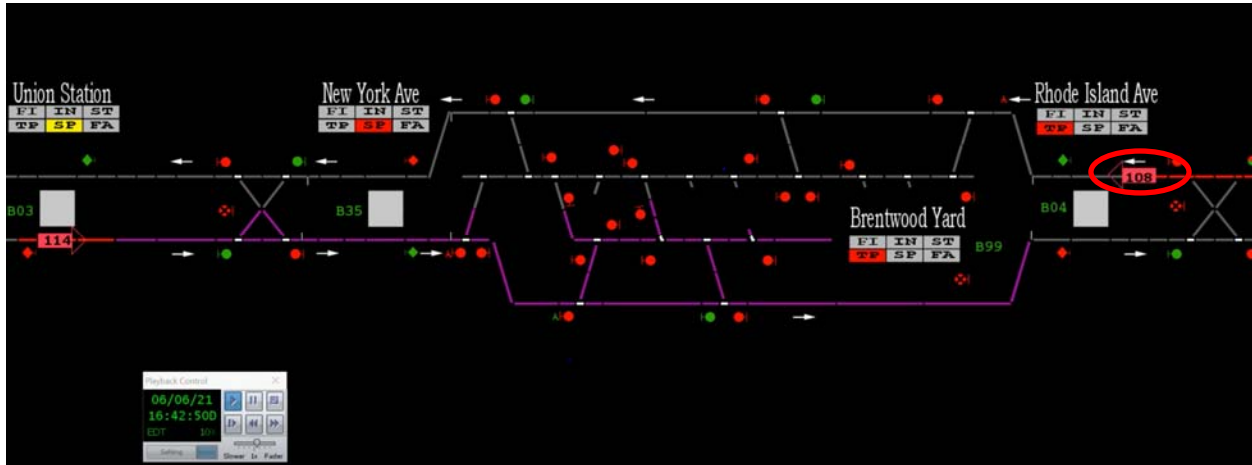


Diagram 1 - Based on the AIMS playback, Train ID 108 passed CM B2-171+00, in the direction of Rhode Island Avenue Station at 16:42:50 hours, which appears to be when they reported they heard a loud noise and didn't know what it was per ARS.

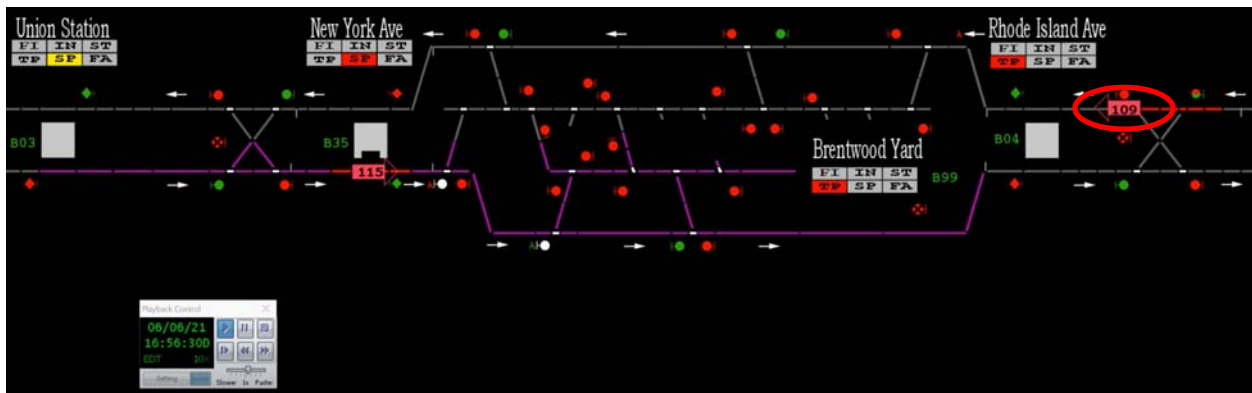


Diagram 2 - Based on the AIMS playback, Train ID 109 arrived at CM B2-171+00, in the direction of Rhode Island Avenue Station at 16:56:30 hours, which appears to be when they reported a person was lying down between the running rail and the catwalk, per ARS.

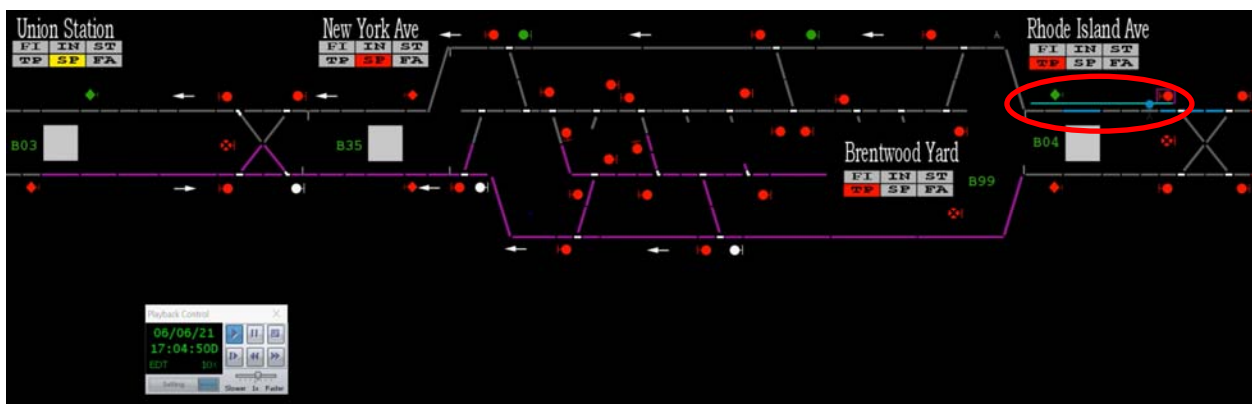


Diagram 3 - Based on the AIMS, at 17:04:50 hours, Train ID 109 reversed ends. The ROCC subsequently de-energized third rail power and prohibit exits, block calls, cancellation of automatic signals, blue block, and human form status at CM B2-171+00.

## **Closed Circuit Television (CCTV) and Network Video Recorder (NVR)**

<b>Time</b>	<b>Description</b>
16:40 hrs.	The person intentionally entered the roadway at 16:40 hours when he jumped down onto the right-of-way and walked toward the Brookland Station, Track 2.
16:41 hrs.	The person is walking on the catwalk and ends up walking out of the camera's view.
16:43:09 hrs.	The Train ID 108 front-facing camera shows the person walking on the roadway, and the person attempted to get out of the path of the oncoming train.
16:43:20 hrs.	Train ID 108 was approaching Rhode Island Avenue Station, Track 2, and stopped their train. At this point, the person was already out of camera view.
16:56 hrs.	Train ID 109 stopped their train and, per, ARS notified the ROCC Radio RTC and reported that a person was in the roadway.

## **Metro Transit Police Department (MTPD)**

The MTPD report revealed at approximately 16:58 hours, MTPD Communications received a call for service from ROCC, stating that a person was on the roadway and was unconscious at Rhode Island Avenue Station. It was later determined that the person had been struck by a train that was no longer on the scene. MTPD, MTPD CID, MTPD CSS, and DCFEMS responded to the scene. DCFEMS located the person on the roadway at CM B2 171+00, showing no signs of life. DCFEMS pronounced the person deceased at 17:30 hours. The DCOCME was notified at 17:36 hours to respond to the scene. At approximately 18:40 hours, DCOCME arrived on the scene. The MTPD report revealed that the person suffered a severe head injury.

MTPD reported the incident train was a revenue Red Line Train ID 108 in the direction of Shady Grove Station. MTPD Detective responded and interviewed the Train ID 108 Train Operator. The Train Operator reported that they heard a thump as the train approached the Rhode Island Avenue Station, Track 2. The Train Operator stated three to four hundred feet after the thump, they put the train's emergency brakes on ("dumped the train") and looked out the window. The Train Operator stated they requested the next train en route to the Rhode Island Avenue station to conduct a track inspection. Train ID 108 Train Operator reported they did not see anything unusual during their visual inspection. Train ID 108 Train Operator berth their train at Rhode Island Avenue Station and serviced the station and conducted another visual check and once again did not see anything unusual. Train ID 108 Train Operator indicated that they opened the bulkhead door in the operator's cab and looked out of it to inspect the front of the train, found nothing, and continued. Train ID 109 Train Operator, the train behind Train ID 108, reported they located a person lying down between the running rail and the catwalk at CM B2 171+00. An RTRA Supervisor on Train ID 109 keyed off the train and went down on the roadway. The RTRA Supervisor reported that the person had an apparent head injury and wasn't breathing. The RTRA Supervisor indicated they instructed Train ID 109 Train Operator to reverse ends and crossed over the interlocking. Train ID 108 Train Operator reported while at the White Flint Station, they were instructed to continue to Shady Grove Yard, where the train would be taken out of service. MTPD CSS processed the scene and incident train. The person's personal property, including pants and paperwork, was found under the bridge where the collision occurred and was recovered by CSS for processing.

MTPD reported that a review of the Rhode Island Avenue Station video revealed at 16:37 hours, the person entered the station after walking over the bridge from the Edgewood Terrace Apartments. The person was only wearing boxer shorts and shoes and was carrying their pants. The person walked up to the platform and approached the north side end gate on the Shady

Grove Station side of the platform. At 16:40 hours, the person jumped down onto the roadway and walked toward the Brookland Station, Track 2. At 16:43 hours, the person made contact with Train ID 108. The person's pants fell off of the bridge and into the parking lot of WMATA. The camera view does not capture how the person was struck, as the camera was not zoomed in at the time.

MTPD reported that a review of Train ID 108 front-facing video revealed the person walking head-on with the train, outside of the running rails near the catwalk, while the train was approaching the Rhode Island Avenue Station. The person appeared to attempt to jump back on the catwalk as the train made contact with them. There are no other camera views after that point. The cab camera view of the Train Operator appeared to show that Train ID 108 Train Operator was not distracted at the time of the collision event.

See Appendix B.

**Office of Car Maintenance (CMNT)**

CMNT personnel inspected car 7474 at Shady Grove Yard and found evidence of dried blood (2 areas: one on the front of the vehicle and the other on its side, approximately the size of a dime). CMNT identified no damage to the body and any components underneath the consist. Additionally, CMNT performed an under-car cleaning and a post-incident inspection on the brake system, propulsion system, and master controller operational checks. CMNT found these subsystems worked as designed. CMNT did not identify any abnormal conditions that contributed to the collision event. See Appendix C.

**Office of Chief Mechanical Officer (CMOR) / Incident Investigation Team (IIT)**

**Event Recorder (ER) Data Graph/Sequence of Events**

Based on IIT CMOR analysis of the downloaded VMDS and ER, details from the data analysis are as follows:

<b>Time</b>	<b>Description</b>
16:42:09 hrs.	Train ID 108 departed Brookland Station, Track 2, with the Master Controller (MC) in the P5 position.
16:43:09 hrs.	Train ID 108 contacted the person on the roadway with a train speed at 35.54 mph, 644 feet away from Rhode Island Avenue Station, Track 2 platform limits.
16:43:10 hrs.	Train ID 108 Train Operator moved the MC from the P1 to the emergency position, initiating an emergency braking application. The consist speed was 35.66 mph, 594.73 feet away from Rhode Island Avenue Station, Track 2 platform limits.
16:43:20 hrs.	Train ID 108 came to a complete stop 270.681 feet after initiating an emergency brake and was 324.05 feet away from Rhode Island Avenue Station, Track 2 platform limits.
16:43:53 hrs.	Train ID 108 emergency brake pipe was recharged, and the Full-Service Brake (FSB) Trainline (T/L) showed energized.

16:44:02 hrs.	Train ID 108 Train Operator moved the MC to the P1 position. Train ID 108 then continued in the direction to Rhode Island Avenue Station, Track 2.
16:44:49 hrs.	Train ID 108 Train Operator berthed the train at Rhode Island Avenue Station, Track 2, 8-car marker.

**Note:** Based on the CMOR IIT post-incident analysis, there were no braking or propulsion faults or any data to support any anomalies with the consist that may have contributed to this incident.

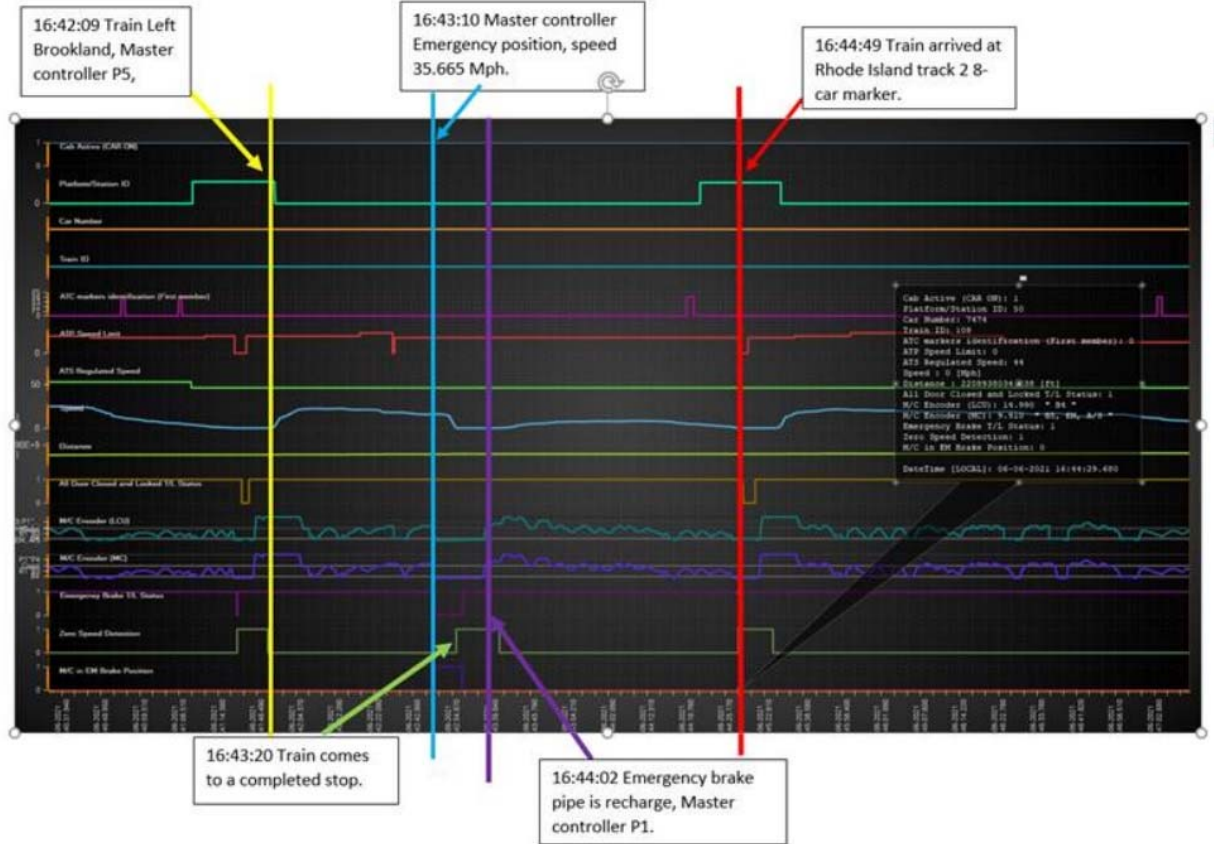


Diagram 4 - ER Graphical Analysis from Lead Car 7474



## Office of System Maintenance Communication Section (COMM)

COMM personnel performed a comprehensive radio operational test between Rhode Island Avenue Station and Brookland Station. The test was successful, and COMM found no issues to report.

**Note:** After reviewing the Audio Recording System playback, there did not appear to be any communication deficiencies over the radio.

### **Interview Findings**

Based on the investigation into the reported person being struck by train event, SAFE conducted one interview and identified the following key findings:

During the virtual interview, the Train Operator reported they were feeling alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

While approaching Rhode Island Avenue Station, Track 2, and after passing the interlocking, they made their observation for a lunar signal and heard a loud noise. The Train Operator indicated that the loud noise startled them, and they immediately placed the MC in the emergency position, looked out the window, and stuck their head out the left side window. Train ID 108 Train Operator reported they did not see anything unusual during their visual inspection. The Train Operator notified the ROCC and requested the next train en route to the Rhode Island Avenue station to conduct a track inspection based on the loud noise they heard that might have been a large bird.

The ROCC instructed the Train Operator to proceed on Rhode Island Avenue Station platform after indicating no troubles displayed on their console. Train ID 108 Train Operator berth their train at Rhode Island Avenue Station and serviced the station and conducted another visual check and once again did not see anything unusual. The Train Operator reported no discrepancies with the train console or any distractions in the cab area.

### **Weather**

At the time of the incident, NOAA recorded the temperature at 90°F with scattered clouds and 46% humidity. (Weather source: National Oceanic Atmospheric Administration – Location: Washington DC.)

### **Human Factors**

#### **Fatigue**

Based on SAFE's review of the Train Operator's 7-day work history, the employee's 7-day work schedule leading up to the incident was compliant with WMATA'S Policy/Instruction 10.6/1 Hours of Service Limitations for Prevention of Fatigue. It did not present a risk of impairment due to fatigue.

## Evidence of Fatigue

The incident data was evaluated, and no signs or symptoms of fatigue were detected from the available data. The Train Operator reported feeling fully alert 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**

The incident data was evaluated for fatigue risk factors. Risk factors for fatigue were not present. The incident time of day did not suggest an increased risk of fatigue-related impairment. The Train Operator was awake for 8.71 hours at the time of the incident. The Train Operator reported nine hours of sleep in the 24 hours preceding the incident. The off-duty period was 38.18 hours which provides an opportunity for 7-9 hours of sleep. The Train Operator reported no issues with sleep.

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**

After reviewing the Train Operator post-incident testing results, it was determined that the Train Operator was not in violation of the Drug and Alcohol Policy and Testing Program 7.7.3/6.

## Findings

- The AIMS display shows that third rail power was de-energized at Rhode Island Avenue Station, Track 2 to CM B2-173+00 at 17:04 hours.
- WMATA personnel complied with SOP 1A and SOP 26 procedures when responding to this event.
- MTPD reported that a review of Train ID 108 front-facing video revealed the person walking head-on with the train, outside of the running rails near the catwalk, while the train was approaching the Rhode Island Avenue Station. The person appeared to attempt to jump back on the catwalk as the train made contact with them. There are no other camera views after that point. The cab camera view of the Train Operator appeared to show that Train ID 108 Train Operator was not distracted at the time of the collision event.
- Based on MTPD's CCTV playback review, at 16:40 hours, the person entered the roadway and walked toward the Brookland Station, Track 2. At 16:43 hours, the person made contact with Train ID 108. The camera view does not capture how the person was struck, as the camera was not zoomed in at the time.
- The person sustained fatal injuries and was pronounced deceased at the scene.
- CMNT identified no damage to the body and any components underneath the consist. Additionally, CMNT did not identify any abnormal conditions that contributed to the collision event.
- Based on the CMOR IIT post-incident analysis, there was no data to support any anomalies with the consist that may have contributed to this incident.
- CMOR IIT personnel reported the emergency stop button was not applied.
- During the virtual interview, the Train Operator reported they were feeling alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.



## Immediate Mitigation to Prevent Recurrence

- The ROCC de-energized third rail power at Rhode Island Avenue Station, Track 2 to CM B2-173+00 so MTPD can enter the roadway to conduct their incident investigation.
- RTRA removed the Train Operator from service for post-incident toxicology testing.
- The ROCC removed Train ID 108 from service for post-incident investigative processes.

## Probable Cause Statement

The probable cause of this collision event was the intentional actions of the person entering the rail right-of-way without authorization for an unknown reason. As Train ID 108 approached the Rhode Island Avenue Station, the person fouled the dynamic envelope of the train and appeared to attempt to jump back on the catwalk before being struck by Train ID 108, Lead Car 7474. Based on Train ID 108's front-facing video, the environmental conditions were favorable and showed a clear day with good visibility. The person appeared in the front-facing video line of sight for approximately three seconds before the train made contact with the person on the roadway. However, during the virtual interview, the Train ID 108 Train Operator was unaware of a person on the roadway. The Train Operator reported that while passing the Rhode Island Avenue Station interlocking, they made their observation for a lunar signal and heard a loud noise. The Train ID 108 Train Operator stated they immediately placed the MC in the emergency position, stuck their head out the window, and did not see anything unusual during their visual inspection. The Train Operator notified the ROCC and requested the next train en route to the Rhode Island Avenue station conduct a track inspection based on the loud noise they heard. The ROCC instructed the Train ID 108 Train Operator to proceed on Rhode Island Avenue Station platform without performing a ground walk around after they reported no troubles were displaying on their console and the Train Operator found nothing during their visual inspection. The person being struck by Train ID 108 appeared to be accidental as the MTPD report revealed that the camera view in the cab area of the Train Operator appeared to show that the operator was not distracted at the time of the collision event.

After an analysis of data collected from systems of record and interviews with staff and MTPD's incident report review, SAFE concludes there were no safety deficiencies related to any WMATA station facility, vehicle, or human factor components identified as contributors to this event.

## Recommendations/Corrective Actions

There are no recommendations as mitigation for this event due to the person intentionally jumping off the platform, fouling the train's dynamic envelope.

## Appendices

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

#### Office of Rail Transportation

##### *Train Operator*

The Train Operator is a WMATA employee with six years of service. The Train Operator started as a Bus Operator and has been a Train Operator for four years. The Train Operator's last rail certification date was in September 2019.

Based on the interview with SAFE, the Train Operator reported they were feeling alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident. However, the Train Operator indicated they have been diagnosed with sleep apnea and utilize a Continuous Positive Airway Pressure (CPAP) machine to help them breathe more easily during sleep. The Train Operator stated they were on their second trip of the day before the collision event. The Train Operator was approaching Rhode Island Avenue Station, Track 2, and after passing the interlocking, they made their observation for a lunar signal and heard a loud noise. The Train Operator indicated that the loud noise startled them, and they immediately placed the MC in the emergency position, looked out the window, and stuck their head out the left side window. Train ID 108 Train Operator reported they did not see anything unusual during their visual inspection. The Train Operator notified the ROCC and requested the next train en route to the Rhode Island Avenue station conduct a track inspection based on the loud noise they heard that might have been a large bird. The ROCC instructed the Train Operator to proceed on Rhode Island Avenue Station platform after indicating no troubles were displaying on their console. Train ID 108 Train Operator berth their train at Rhode Island Avenue Station and serviced the station and conducted another visual check and once again did not see anything unusual. The Train Operator reported no discrepancies with the train console or any distractions in the cab area. The Train Operator reported while at the White Flint Station, they were instructed to continue to Shady Grove Yard, where the train would be taken out of service. The MTPD Detective was waiting for the Train Operator when they arrived at Shady Grove Yard.

Appendix B - MTPD Executive Briefing Report



**METRO TRANSIT POLICE DEPARTMENT**  
**CRIMINAL INVESTIGATION DIVISION**  
**EXECUTIVE BRIEFING**



**Person Struck by Train:**

MTP: 2021-02631  
CFS: 21-00018496

**Location:** 919 Rhode Island Ave. NE, Washington, DC 20018

**Date:** June 6, 2021

**Time:** 1658 hours

**Lead Agency:**

Metro Transit Police Department (MTPD)

**Patrol Command:**

[REDACTED]  
[REDACTED]  
[REDACTED]

**Patrol Officers:**

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

**CID Detectives:**

[REDACTED]  
[REDACTED]  
[REDACTED]

**Reporting Officers:**

[REDACTED]

**Crime Scene Officer:**

[REDACTED]  
[REDACTED]

NON-LAW ENFORCEMENT SENSITIVE



# METRO TRANSIT POLICE DEPARTMENT



## CRIMINAL INVESTIGATION DIVISION

### EXECUTIVE BRIEFING

**Train Operator:**

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

**Rail Supervisor:**

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

**Case Summary:**

At approximately 1658 hours MTPD Communications received a call for service from ROCC stating that a person was on the trackbed and was unconscious at the Rhode Island Avenue metro station. It was later determined that the individual had been struck by a train that was not on the scene any longer. MTPD POB units, CID units, and DCFD responded to the scene. The victim was reported as showing no signs of life and was pronounced at 1730 hours by DCFD Robert Holman. The OCME was notified and responded to the scene.

**Further investigation revealed:**

Detective Sergeant [REDACTED], Detective [REDACTED] and Detective [REDACTED] responded to the Rhode Island Avenue metro station to assist with the investigation.

DCFD and EMS units responded, and the victim was located on the right-of-way, at chain marker B2-171+00, showing no signs of life. DCFD [REDACTED] pronounced the victim at 1730 hours. DC OCME was notified and asked to respond at 1736 hours by Detective Sergeant [REDACTED]. At approximately 1840 hours, Medical Examiner [REDACTED] arrived on the scene. The decedent suffered a severe head injury.

A determination was made after video review that the incident train was a revenue Red line train #108, that was en route to Shady Grove and would be held at the Shady Grove Rail Yard for processing. Detective [REDACTED] responded and interviewed the train operator. The operator reported that he heard a thump as the train was on approach to the Rhode Island Avenue metro station. The operator advised three to four hundred feet after the thump, he put the train's emergency brakes on ("dumped the train") and looked out the window. The operator stated he requested the next train en route to the Rhode Island Avenue metro station to conduct a track

NON-LAW ENFORCEMENT SENSITIVE





# METRO TRANSIT POLICE DEPARTMENT



## CRIMINAL INVESTIGATION DIVISION

### EXECUTIVE BRIEFING

inspection. The operator advised he did not see anything unusual during his visual inspection. The operator stated he pulled the train into the Rhode Island Avenue metro station and serviced the station. The operator stated he conducted another visual inspection of the train car and once again did not see anything unusual. The operator advised that he opened the bulkhead door in the operator's cab and looked out of it to inspect the front of the train, with nothing found. The operator advised he reported his inspection to rail. The operator advised that he continued on and while at the White Flint metro station, rail advised him to continue to Shady Grove where the train would be taken out of service.

Detective [REDACTED] interviewed the Rail Supervisor. The Rail Supervisor advised that the train operator of train #108 advised that he heard a thump and needed the next train between the Brookland metro station and the Rhode Island Avenue metro station to perform a track inspection. The Rail Supervisor was in the cab of train #109 and located an individual that was laying down between the running rail and the catwalk at chain marker B2-171+00. The Rail Supervisor keyed off of the train and went down on the right-of-way. The Rail Supervisor advised that the individual had an obvious head injury and wasn't breathing. The Rail Supervisor advised that train #109 then reversed and crossed over the interlocking. The Rail Supervisor was relieved by MTPD officers.

Crime Scene Search (CSS) Officers [REDACTED] processed the scene and incident train. Personal property belonging to the victim, including pants and paperwork, was found under the bridge that the decedent was stuck on, which was recovered by CSS for processing. The train was moved to the Shady Grove rail yard for further processing. Video review of the front of the train car shows the decedent walking head-on with the train, outside of the running rails near the catwalk, while the train is approaching the Rhode Island Avenue metro station. The decedent appears to attempt to jump back on the catwalk as the train strikes him. There are no other camera views after that point. The camera view of the train operator appears to show that the operator was not distracted at the time.

A preliminary review of the Rhode Island Avenue metro station video revealed at 1637 hours, the decedent entered the station after walking over the bridge from the Edgewood Terrace Apartments. The decedent was only wearing boxer shorts and shoes and was carrying his pants. The decedent walked up to the platform and approached the north side end gate on the Shady Grove side of the platform. At 1640 hours, the decedent hops down onto the right-of-way and walks toward the Brookland metro station. At 1643 hours, the decedent makes contact with train #108. The decedent's pants fall off of the bridge and into the parking lot of WMATA Low Voltage department. The camera view does not clearly capture how the decedent was struck, as the camera is not zoomed in at the time.

NON-LAW ENFORCEMENT SENSITIVE

Attachment 3 – Page 3 of 3.

# Appendix C– CMNT Car 7474 Work Order Details



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

Page 1 of 2  
MX76PROD

Work Order #: 16372136  
Type: CM



Status: INPRG  
06/07/2021 01:21

Work Description: REPORT OF A TRAIN MADE CONTACT WITH PERSON  
Job Plan Description:

Work Information			
Asset: R7474	7474, RAIL CAR, KAWASAKI, 7000 AC, A CAR	Owning Office: CMNT-CMNT-CMNT	Parent:
Asset Tag: R7474		Maintenance Office: CMNT-SDYG-INSP	Create Date: 06/07/2021 01:20
Asset S/N: 7474		Labor Group:	Actual Start: 06/07/2021 01:21
Location: 1138	A99, SHADY GROVE YARD	Crew:	Actual Comp:
Work Location: 1138	A99, SHADY GROVE YARD	Lead:	Item: K18050001
Failure Class: CMNT003	CAR BODY	GL Account: WMATA-02-33320-50499160-041-*****-OPR**	Target Start:
Problem Code:		Supervisor:	Target Comp:
Requested By:		Requestor Phone: [REDACTED]	Scheduled Start:
Chain Mark Start:		Chain Mark End:	
Create-Mileage: [REDACTED]		Complete-Mileage: 0.0	

**Task IDs**

Task ID	Description	Component	Work Accom	Reason	Status	Position	Warranty?
10	INSPECTED TRAIN IN YARD FOR DAMAGES TO BODY AND COMPONENTS UNDERNIETH AND SIDES OF TRAIN DIDNT FIND ANY DAMAGE TO ANY COMPONENTS OR TRAIN BODY. TRAIN IS GOOD FOR SERVICE AND THE AREA WHERE PERSON WAS HIT NEEDS TO BE CLEANED.	000-300-800 SUBSYSTEM, CAR BODY, 2K/3K/6K/7K	INSPECTED	INCIDENT//ACCIDENT	APPR	232	Y
20	CLAENED AREA WHERE PERSON WAS STRUCK, CHECKED UNDERCAR FOR DAMAGE, NO DAMAGE FOUND	000-300-800 SUBSYSTEM, CAR BODY, 2K/3K/6K/7K	CLEANED	DEBRIS PRESENT	APPR		Y
30	CHECKED PROPULSION AND BRAKE TEST NO FAULTS.	000-300-000 SUBSYSTEM, PROPULSION, 2K/3K/6K/7K	TESTED	NO TROUBLE FOUND	APPR		N

**Actual Labor**

Task ID	Labor	Start Date	End Date	Start Time	End Time	Approved?	Regular Hours	Premium Hours	Line Cost
[REDACTED]	[REDACTED]	06/06/2021	06/06/2021	22:00	23:00	N	01:00	00:00	\$35.85
[REDACTED]	[REDACTED]	06/07/2021	06/07/2021	08:00	09:00	N	01:00	00:00	\$39.49
[REDACTED]	[REDACTED]	06/07/2021	06/07/2021	09:00	11:00	N	02:00	00:00	\$68.94
<b>Total Actual Hour/Labor:</b>							04:00	00:00	\$144.28

WT\_plust\_woprint.rptdesign

06/8/2021 07:56

Attachment 2 – Page 1 of 1.

## Appendix D - Root Cause Analysis

