

**WMSC Commissioner Brief: W-0101 – Collision With Customer – Suitland Station – March 13, 2021**

Prepared for Washington Metrorail Safety Commission meeting on August 3, 2021

Safety event summary:

A Metrorail Station Manager correctly monitoring CCTV identified that a customer was lying on the tracks at Suitland Station, and attempted to have an approaching train stopped before entering the station. The message did not reach the Train Operator in time, and the train entered the station and struck the person on the tracks. Metrorail's Security Operations Control Center (SOCC) and the Rail Operations Control Center (ROCC) did not identify or communicate this person being on the roadway. There were few passengers in the station during this time, and none appeared to see the person on the roadway.

The Suitland Station Manager contacted the Rail Operations Information Center (ROIC) at approximately 6:08:10 p.m., who then relayed the message to the appropriate rail controller. (The ROIC is a desk in the Rail Operations Control Center. The rail controllers have their own desks in a different part of the room). The rail controller attempted to contact Train 508 at approximately 6:08:37 p.m. However, the Train Operator did not acknowledge or otherwise respond prior to striking the person on the roadway. At 6:08:58 p.m., the Train Operator notified the ROCC that their train had struck a person on the roadway.

The train entered the station at approximately 34.9 mph and had slowed to 31.2 mph when the Train Operator activated emergency braking approximately 140 feet into the platform. The train struck the person approximately 3 seconds later at a speed of approximately 22.5 mph. The person was approximately 251 feet (just under halfway) into the station platform. The train stopped 327 feet into the platform. Customers on the rear of the train were evacuated to the station platform by walking through the train to cars that had doors on the platform.

The investigation identified that the person had unintentionally fallen onto the roadway at 5:57 p.m., and was struck by the train at 6:08 p.m.

The ROCC de-energized third rail power at 6:12 p.m. A first Rail Transportation Supervisor stated they arrived on scene at approximately 6:16 p.m. but was not designated on-scene commander by the ROCC. At 6:21 p.m., a Rail Transportation Supervisor was appointed forward liaison and told they were relieving the Train Operator. According to Metrorail SOP 1A, the supervisor should have been designated as on-scene commander not forward liaison. At 6:27 p.m., that supervisor stated that Prince George's County Fire Department and Metro Transit Police Department were on scene. Alternately, MTPD stated that a rail supervisor arrived at 6:29 p.m.

The person was conscious when the Train Operator conducted a ground walk-around. The Prince Georges County Fire Department transported the person to a hospital.

After the event and initial investigation, Metrorail repaired the lead car of the train.

Probable Cause:

The probable cause of this event was a person inadvertently falling onto the roadway. Contributing to the severity of this event were the timeliness of Metrorail's identification and response, Metrorail's processes for reporting hazards and emergencies on the roadway, and Metrorail's limited continuous monitoring of the system, both in person and using



available data such as CCTV video, to identify and mitigate hazards as required by a safety management systems (SMS) approach.

WMSC staff observations:

This event demonstrates the importance of and opportunities for significant safety improvements from regular and consistent monitoring of available data such as CCTV as would be done in a fully functioning safety management system (SMS) required under Metrorail's Public Transportation Agency Safety Plan (PTASP). While the warning was delivered too late in this instance, the Station Manager should be commended for attempting to prevent this collision.

Given this event, Metrorail should consider specific procedures and communications processes to improve the response time in the future. This could include improving monitoring, and encouraging and training Station Managers or other employees monitoring CCTV such as Metro Transit Police (MTPD) to immediately report specific situations on the main operational channels as emergencies so that Train Operators can respond as quickly as possible. This event also demonstrates that had this system monitoring been more continuous, the warning may have come in time to avoid the collision entirely. Acknowledging opportunities like this for safety improvement does not assign fault for past events, it helps prevent future events.

It is not clear that Metrorail confirmed that power was down using a hot stick prior to emergency personnel entering the roadway. MTPD stated that WSADs were placed on the roadway, but this information was not communicated on the radio to ROCC.

Metrorail did not sufficiently review CCTV and vehicle video footage as part of this investigation. The Safety Department stated that station video and forward-facing video from the train was withheld by MTPD. Safety event investigations are a critical process that must be used to determine mitigations that can reduce the likelihood of recurrence. This process and other aspects of Metrorail's Public Transportation Agency Safety Plan, and the safety management system (SMS) approach it incorporates, require access to and consideration of all available data and information, including video. While Metrorail attempted to reference a criminal investigation, a safety investigation and criminal investigation are separate processes that can and do operate in parallel, not in conflict with one another.

The WMSC, in coordination with Metrorail, has since instituted a specific protocol for the WMSC to receive Metrorail video files and to access live video streams.

Staff recommendation: Adopt final report.



Washington Metro Area Transit Authority

Department of Safety and Environmental

Management (SAFE)

FINAL REPORT OF INVESTIGATION A&I E21108

Date of Event:	3/13/2021
Type of Event:	Collision
Incident Time:	18:08 hours.
Location:	Suitland Station, Track 2
Time and How received by SAFE:	18:11 hours. SAFE On-call Phone
WMSC Notification Time:	19:18 hours
Rail Vehicle:	Train ID 508 [L7512/13 X 7509/08 X 7496/97 X 7657/56]
Injuries:	Yes
Damage:	Damaged Train to Wayside Communications (TWC) Transmit Antenna on Car 7512
SMS I/A Incident Number:	20210313#92278

Suitland Station
Collision
March 13, 2021

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Abbreviations and Acronyms

AIMS	Advanced Information Management System
ARS	Audio Recording System
CCTV	Closed-Circuit Television
CM	Chain Marker
CMOR	Office of Chief Mechanical Officer
COMM	Office of Systems Maintenance Communication Section
DVEU	Digital Video Evidence Unit
EMS	Emergency Medical Services
ERT	Emergency Response Team
IC	Incident Commander
IIT	Incident Investigation Team
MOC	Maintenance Operations Control
MSRPH	Metrorail Safety Rules and Procedures Handbook
MTPD	Metro Transit Police Department
NOAA	National Oceanic and Atmospheric Administration
PGCGD	Prince George's County Fire Department
ROCC	Rail Operations Control Center
ROIC	Rail Operations Information Center
RTC	Rail Traffic Controller
RTRA	Office of Rail Transportation
RWP	Roadway Worker Protection
SAFE	Department of Safety and Environmental Management
SMS I/A	Safety Measurement System Incidents/Accidents
SOP	Standard Operating Procedure
TWC	Train to Wayside Communications
VMDS	Vehicle Monitoring and Diagnostic System
WMATA	Washington Metropolitan Area Transit Authority
WSADS	Warning Strobe Alarm Devices
WMSC	Washington Metrorail Safety Commission

Executive Summary

On Saturday, March 13, 2021, Audio Recording System (ARS) playback revealed at 18:08 hours, the Suitland Station Manager requested the Rail Operations Information Center (ROIC) Specialist to stop the incoming train at Suitland Station, Track 2. The Suitland Station Manager reported Closed Circuit Television (CCTV) in their Suitland Station kiosk revealed that a person was lying on the roadway. ROIC Specialist immediately relayed the information to the Rail Operations Control Center (ROCC) Radio Rail Traffic Controller (RTC). Based on ARS playback, ROCC attempted to contact Train ID 508 to instruct them to stop their train at 18:08 hours. Within the same time parameters, the Train Operator of Train ID 508 L7512/13 X 7509/08 X 7496/97 X 7657/56, Green Line train, notified the ROCC Radio RTC that their consist had struck a person within the platform limits at Suitland Station, Track 2.

The ROCC initiated emergency notifications to the respective internal and external departments. ROCC de-energized third rail power at Suitland Station, Track 2, and began single-tracking between Naylor Road Station and Branch Avenue Station, Track 1. The Prince George's County Fire Department (PGCFD), 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. The Train Operator of Train ID 508 conducted a ground walk-around and determined the person was conscious and alert. The PGCFD extricated the injured person from underneath Car 7512 and subsequently transported the person to Prince George's Hospital Center for further medical evaluation.

Based on the Advanced Information Management System (AIMS) playback, at 18:12 hours, the Buttons RTC de-energized third rail power on Track 2. Based on ARS playback, [radio and ambient] at 18:16 hours, the ROCC Radio RTC complied with Standard Operating Procedure (SOP) 1A per the Metrorail Safety Rules and Procedures Handbook (MSRPH). The ROCC Radio RTC assigned the Train Operator as On Scene Commander (OSC). Additionally, upon arrival of the RTRA Supervisor at 18:21 hours, ROCC Radio RTC appointed them as the RTRA Forward Liaison. RTRA removed the Train Operator from service for post-incident toxicology testing per RTRA's SOP 102-1 Removing an Employee from Service.

Based on the Vehicle Monitoring and Diagnostic System (VMDS) data, Train ID 508 entered the Suitland Station, Track 2, with a train speed of 34.9 MPH. The Train Operator placed the master controller in an emergency position 140 feet within the Suitland Station platform, which was 111 feet before the train made contact with the person on the roadway. The estimated speed at which the person was struck by the train was 22.5 MPH. The train came to a complete stop 327 feet into the Suitland Station platform traveling 76 feet after contact. Based on the Office of Chief Mechanical Officer (CMOR) / Incident Investigation Team (IIT) post-incident analysis, there was no data to support any anomalies with the consist that may have contributed to this incident.

The MTPD hot wash summary report revealed that at 17:57 hours, the person fell on the roadway at the Suitland Station, Track 2, and was struck by a train at 18:08 hours. MTPD, Digital Video Evidence Unit (DVEU), confirmed the events. Per MTPD, the individual appeared to fall on the roadway due to intoxication and did not intentionally place themselves in the roadway. The person was removed from the roadway at 18:36 hours after being brought out through the area of refuge. The person was transported to Prince George's Hospital Center at 18:45 hours. After being assessed at the hospital, the person was then transported to R Adams Cowley Shock Trauma Center for further medical treatment. See Appendix A.

Based on ARS playback, at 20:11 hours, the RTRA Forward Liaison reported to the ROCC that MTPD personnel was clear of the roadway and had completed their investigation. At 20:43 hours, Emergency Response Team (ERT) personnel reported a good track inspection, and all personnel and equipment were clear of the roadway. Regular rail service resumed at 20:49 hours.

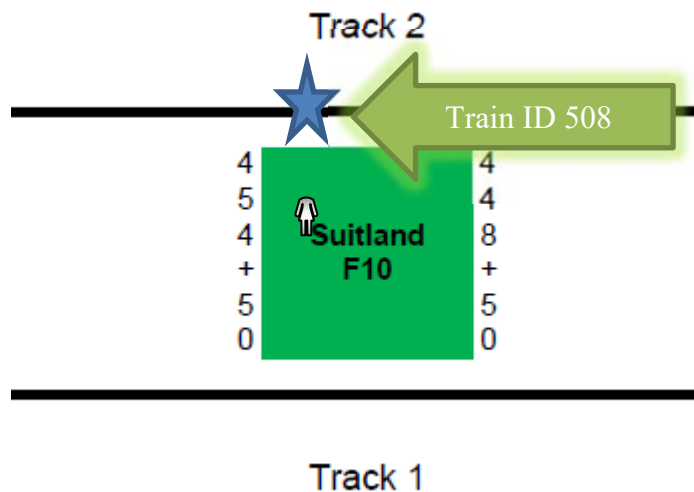
The probable cause of the Person Struck by Train at Suitland Station event on March 13, 2021, was the person's inability to remain on the station's platform. The person appeared unsteady on their feet while walking on the platform and subsequently fell onto the roadway, unintentionally placing themselves within the train's dynamic envelope.

An analysis of data collected from systems of record, interviews with staff, and MTPD 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

Suitland Station, Track 2

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
 - 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

Investigation

On Saturday, March 13, 2021, ARS playback revealed at 18:08 hours, the Suitland Station Manager notified ROIC Specialist and asked them to stop the incoming train at Suitland Station, Track 2. The Suitland Station Manager reported the Suitland Station kiosk CCTV revealed that a person was lying on the roadway. ROIC Specialist immediately relayed the information to the Rail ROCC.

Advanced Information Management System (AIMS)



Diagram 1 - Based on the AIMS playback, Train ID 508 entered Suitland Station, Track 2, at 18:08:40 hours, and appears to be when they reported the person on the roadway per ARS.

Based on ARS playback, ROCC attempted to contact Train ID 508 to instruct them to stop their train at 18:08 hours. Within the same time parameters, the Train Operator of Train ID 508, Green

Line train, notified the ROCC Radio RTC that their consist had struck a person within the platform limits at Suitland Station, Track 2.



Diagram 2 - Based on the AIMS, the green symbol on the AIMS power display shows that the third rail power was subsequently de-energized at Suitland Station, Track 2, at 18:12:00 hours.

Based on ARS playback, the PGCFD extricated the injured person from underneath Car 7512 and transported the person to a nearby hospital at 18:36 hours. At approximately 19:28 hours, third rail power was restored on Track 2. Incident Train ID 508 moved towards Branch Avenue Yard for post-incident inspection. Single tracking was concluded between Naylor Road Station and Branch Avenue Station.

Audio Recording System (ARS) Chronological Event Timeline

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

18:08:10hrs.	<u>Suitland Station Manager</u> : Notified Rail Operations Information Center (ROIC) and instructed them to stop the incoming train at Suitland Station Track 2. The CCTV in their Suitland Station kiosk revealed that a person was lying on the roadway. <u>ROIC</u> : Notified Radio RTC and instructed them to stop the incoming train at Suitland Station Track 2; a person is lying on the roadway. <u>ROCC Radio RTC</u> : Responded, stop the train at Suitland Station Track 2; a person was lying on the roadway. <u>Suitland Station Manager</u> : Stated the person was just struck by the train. <u>ROIC</u> : Instructed Suitland Station Manager to go to the platform and give Ops 3 a radio check. [Ambient]
18:08:37 hrs.	<u>ROCC Radio RTC</u> : Notified Train ID 508 Train Operator at Suitland Station Track 2. [Ops 3]

18:08:58 hrs.	<p><u>Train ID 508 Train Operator</u>: Notified ROCC Radio RTC and reported striking a person within the platform limits at Suitland Station, Track 2.</p> <p><u>ROCC Radio RTC</u>: Responded, how many cars do you have on the platform at this time over?</p> <p><u>Suitland Station Manager</u>: Requested a radio check and then stated emergency, emergency, emergency.</p> <p><u>Train ID 508 Train Operator</u>: Responded, three cars within the platform limits.</p> <p><u>ROCC Radio RTC</u>: Responded, are you all right at this time, and are you able to key the consist down, provide a radio check on your handset, and conduct a ground walk around?</p> <p><u>Train ID 508 Train Operator</u>: Responded, just a little shaky, but I will try. [Ops 3]</p>
18:09:14 hrs.	<p><u>ROCC Radio RTC</u>: Notified MOC Assistant Superintendent and reported a train made contact with a person. [Ambient]</p>
18:10:04 hrs.	<p><u>ROCC Radio RTC</u>: Notified MTPD and reported a person being struck by a train at Suitland Station, Track 2. [Ambient]</p>
18:10:12 hrs.	<p><u>ROCC Assistant Superintendent</u>: notified Prince George's County 911 Center and reported a person being struck by a train at Suitland Station, Track 2. [Phone]</p>
18:10:17 hrs.	<p><u>ROCC Radio RTC</u>: Notified Train ID 508 Train Operator and appointed them as the OSC.</p> <p><u>Train ID 508 Train Operator</u>: Acknowledged.</p> <p><u>ROCC Radio RTC</u>: Announced over the radio, are there any RTRA Supervisors in the area?</p> <p><u>RTRA Supervisor One</u>: Responded. This is Branch Avenue RTRA Supervisor en route to the incident. [Ops 3]</p>
18:11:20 hrs.	<p><u>ROCC Radio RTC</u>: Notified Train ID 508 Train Operator and asked what is your lead car and are you still in the operating cab?</p> <p><u>Train ID 508 Train Operator</u>: The consist lead car is 7512, and I am walking through the interior of the out of service consist escorting the persons off the train.</p> <p><u>ROCC Radio RTC</u>: Acknowledged and instructed the Train ID 508 Train Operator to secure their consist by setting the handbrake.</p> <p><u>Train ID 508 Train Operator</u>: Acknowledged. [Ops 3]</p>
18:11: 40 hrs.	<p><u>ROIC</u>: Notified SAFE and reported a person being struck by a train at Suitland Station, Track 2. [Ambient]</p>
18:11:51 hrs.	<p><u>ROCC Radio RTC</u>: Alerted all Train Operators approaching the area and reported an emergency at Suitland Station, Track 2. Please make prescribed public address announcements to passengers on trains and in stations. [Ops 3]</p>
18:12:12 hrs.	<p><u>MOC Assistant Superintendent</u>: Notified ERT and reported a person being struck by a train at Suitland Station, Track 2. [Phone]</p>
18:12:51 hrs.	<p><u>Train ID 508 Train Operator</u>: Notified ROCC Radio RTC and reported the person was still alive; they can hear them.</p> <p><u>ROCC Radio RTC</u>: Responded, is the consist clear of persons.</p> <p><u>Train ID 508 Train Operator</u>: Responded, not yet.</p> <p><u>ROCC Radio RTC</u>: Dispatched Suitland Station Manager. [Ops 3]</p>
18:15:22 hrs.	<p><u>ROCC Radio RTC</u>: Alerted all Train Operators approaching the area and reported an emergency at Suitland Station, Track 2. Please make prescribed</p>

	public address announcements to passengers on trains and in stations. [Ops 3]
18:16:50 hrs.	<u>ROCC Radio RTC</u> : Notified Train ID 508 Train Operator and asked, are you still performing your ground walk around? <u>Train ID 508 Train Operator</u> : Responded; ground walk around was complete. The Train Operator reported to the ROCC Radio RTC they were on scene with the Suitland Station Manager, and the person struck by a train showed signs of life. [Ops 3] <u>ROCC Radio RTC</u> : Acknowledged and indicated fire department was en route. [Ops 3]
18:20:20 hrs.	<u>ROCC Radio RTC</u> : Alerted all Train Operators approaching the area and indicated there was an emergency at Suitland Station, Track 2, and we are single-tracking between Naylor Road and Branch Avenue, Track 1. [Ops 3]
18:20:56 hrs.	<u>ROCC Radio RTC</u> : Notified CMNT and instructed them to respond to the incident scene. [Ops 3]
18:21:41 hrs.	<u>ROCC Radio RTC</u> : Notified RTRA Supervisor and asked, what is your location, over? <u>RTRA Supervisor</u> : I just made it to Suitland Station. <u>ROCC Radio RTC</u> : Once you arrive at the platform, you will be appointed as the RTRA Forward Liaison and relieving the Train Operator. [Ops 3]
18:22:37 hrs.	<u>ROCC Radio RTC</u> : Alerted all Train Operators approaching the area and indicated SOP #1A is in effect; there was an emergency at Suitland Station, Track 2, and we are single-tracking between Naylor Road and Branch Avenue, Track 1. [Ops 3]
18:27:14 hrs.	<u>RTRA Forward Liaison</u> : Notified ROCC Radio RTC and reported PGCFD and MTPD are on scene. <u>ROCC Radio RTC</u> : Acknowledged and asked MTPD will be the OCS. <u>RTRA Forward Liaison</u> : Responded, I will go back upstairs and make sure. [Ops 3]
18:31:03 hrs.	<u>MOC Assistant Superintendent</u> : Notified SAFE and reported a person being struck by a train at Suitland Station, Track 2. [Phone]
18:32:37 hrs.	<u>RTRA Forward Liaison</u> : Notified ROCC Radio RTC and reported that third rail power was de-energized and PGCFD was attempting to enter the roadway to perform their assessment. <u>ROCC Radio RTC</u> : Do you have a working hot stick? <u>RTRA Forward Liaison</u> : Responded, the fire department was on the roadway attempting to extricate the person from the roadway, and the person was currently under Lead Car 7512. <u>ROCC Radio RTC</u> : Acknowledged. [Ops 3]
18:36:05 hrs.	<u>RTRA Forward Liaison</u> : Notified ROCC Radio RTC and reported that the fire department extricated the injured person from underneath car 7512 and subsequently transported the person to a nearby hospital. All personnel were clear of the roadway. [Ops 3]
18:42:55 hrs.	<u>RTRA Forward Liaison</u> : Notified ROCC Radio RTC and reported that the fire department departed the scene, and MTPD continued their investigation. [Ops 3]
18:57:56 hrs.	<u>RTRA Forward Liaison</u> : Notified ROCC Radio RTC and reported that CMNT personnel were on the roadway inspecting the train for damage. [Ops 3]

19:00:45 hrs.	<u>RTRA Forward Liaison</u> : Notified ROCC Radio RTC and reported that CMNT personnel identified a broken TWC Coil on the lead car, and CMNT was securing it to prevent any dragging. [Ops 3]
19:20:54 hrs.	<u>RTRA Supervisor</u> : Notified ROCC Radio RTC and reported that all personnel and equipment were clear of the roadway and the On-Scene I/C requested that third-rail power be restored at the ROCC's discretion. <u>ROCC Radio RTC</u> : Acknowledged and announced third rail restoration efforts were in effect, Suitland Station, Track 2. [Ops 3]
19:25:17 hrs.	<u>RTRA Forward Liaison</u> : Notified ROCC Radio RTC and reported that CMNT and MTPD just boarded the consist. [Ops 3]
19:28:52 hrs.	<u>RTRA Forward Liaison</u> : Notified ROCC Radio RTC and reported that the affected consist departed Suitland Station, Track 2 and en route to Branch Avenue Yard. [Ops 3]
19:33:45 hrs.	<u>RTRA Forward Liaison</u> : Notified the ROCC Radio RTC and reported MTPD requested permission to go on the roadway at Suitland Station, Track 2, to further their investigation and needed permission to hot stick to verify third rail power was de-energized. <u>ROCC Radio RTC</u> : Acknowledged and stated F09-08 signal was red, prohibit exits, block calls, cancellation of automatic signals, blue block, and human form status were in place, you have permission to enter the roadway to hot stick to verify third rail power is de-energized on Track 2 at Suitland Station and provide a chain marker. [Ops 3]
19:36:08 hrs.	<u>RTRA Forward Liaison</u> : Notified the ROCC Radio RTC and confirmed that third rail power was de-energized at chain marker F2-448+00. <u>ROCC Radio RTC</u> : Acknowledged and granted RTRA Forward Liaison permission to escort MTPD to the roadway to start their investigation. [Ops 3]
20:11:15 hrs.	<u>RTRA Forward Liaison</u> : Notified the ROCC Radio RTC and reported that MTPD personnel was clear of the roadway and completed their investigation. [Ops 3]
20:16:00 hrs.	<u>ERT personnel</u> : Notified the ROCC Radio RTC and stated third-rail power was de-energized, and they would like to use Foul Time to enter the roadway to perform cleanup efforts. <u>ROCC Radio RTC</u> : Acknowledged and stated F09-08 signal was red, prohibit exits, block calls, cancellation of automatic signals, blue block, and human form status were in place, you have permission to enter under Foul Time protection to perform cleanup efforts. [Ops 3]
20:43:27 hrs.	<u>ERT</u> : Notified the ROCC Radio RTC and reported a good visual track inspection, and reported that all personnel were clear of the roadway. <u>RTRA Forward Liaison</u> : Notified the ROCC Radio RTC and reported that all personnel and equipment were clear of the roadway, and third-rail power could be restored at the ROCC's discretion. <u>ROCC Radio RTC</u> : Acknowledged and announced third rail restoration efforts were in effect, Suitland Track 2. [Ops 3]
20:49:43 hrs.	<u>ROCC Radio RTC</u> : Alerted all train operators that normal service resumed at Suitland Station, Tracks 1 and 2. [Ops 3]

Metro Transit Police Department (MTPD)

MTPD reported their investigation revealed that at 17:57 hours, the person fell on the tracks at the Suitland Station, Track 2, and was struck by a train at 18:08 hours. MTPD units were

dispatched to the call for service of the person being struck by a train. DVEU confirmed the events and that the individual appeared to fall on the roadway due to intoxication and did not intentionally place themselves in the roadway. At 18:13 hours, an MTPD Sergeant responded to the ROCC, MTPD Crime Investigation Department (CID) responded to the scene, and PGCFD and MTPD arrived. At 18:18 hours, the person was located under Lead Car 7512. The person was reported to be awake and alert. MTPD established On Scene I/C at 18:19 hours and isolated the Train Operator in the lead car. MTPD confirmed third rail power was de-energized and placed a Warning and Strobe Alarm Devices (WSAD) on the roadway to ensure scene safety at the direction of PGCFD. MTPD Sergeant One took over as On Scene I/C at 18:28 hours, and MTPD Sergeant Two established Forward Liaison. At 18:29 hours, RTRA Supervisor arrived on the scene. The person was removed from the tracks at 18:36 hours after being brought out through the area of refuge. The person was transported to Prince George's Hospital Center at 18:45 hours. After being assessed at the hospital, the person was transported to R Adams Cowley Shock Trauma Center for further medical treatment.

At 18:41 hours, PGCFD cleared the scene and turned it over to MTPD. MTPD Crime Scene Search (CSS) Officer took photographs of the emergency incident scene. After collecting, processing, and analyzing evidence of the crime scene, CMNT personnel secured a broken Train-to-Wayside Communication (TWC) Transmit Antenna on lead car 7512. All personnel and equipment were clear of the roadway, and the ROCC restored third-rail power. CMNT personnel, while accompanied by MTPD, moved the consist to Branch Avenue Rail Yard for post-incident inspection. MTPD final processing was completed at Suitland Station, Track 2, at 19:12 hours. The WSADs were removed from the roadway. At 19:55 hours, MTPD turned over the scene to RTRA Supervisor, and all MTPD units returned to service. See Appendix A.

Office of Car Maintenance (CMNT)

Upon arrival at the scene, CMNT performed an on-site exterior and interior inspection of the affected car and identified a broken TWC Transmit Antenna on Car 7512. CMNT personnel secured the broken TWC Transmit Antenna for safe movement in travel to Branch Avenue Rail Yard where CMNT personnel replaced the broken TWC Transmit Antenna, and CMNT performed an under-car cleaning. Additionally, CMNT performed 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 anomalous conditions that could have contributed to the collision event. See Appendix B.

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

Event Recorder (ER) Data Graph/Sequence of Events

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

TIME	Description
18:08:34.8 hrs.	The consist entered the Suitland Station, Track 2, traveling at 34.9 mph, with the master controller in a B1-B3 braking position.
18:08:37.3 hrs.	The consist master controller was moved to the B4 braking position, and the consist speed was 32 mph.
18:08:37.4 hrs.	The consist master controller was moved to the B5 braking position, and the consist speed was 31.7 mph.

18:08:37.7 hrs.	The consist master controller was moved to the EMERGENCY position, initiating emergency braking application; train speed was 31.2 mph and 140 feet onto the platform limits.
18:08:40.7 hrs.	The consist made contact with the person on the roadway; the consist speed was approximately 22.5 mph with the master controller in the EMERGENCY position and 251 feet onto Suitland Station platform limits.
18:08:47.1 hr.	The consist came to a complete stop 327 feet onto the Suitland Station platform limits.

The VMDS data does not show any anomalies with the railcar's operations contributing to this incident. All the subsystems' safety components such as Automatic Train Control (ATC), brakes, and propulsion acted as designed to bring the train to a complete stop.

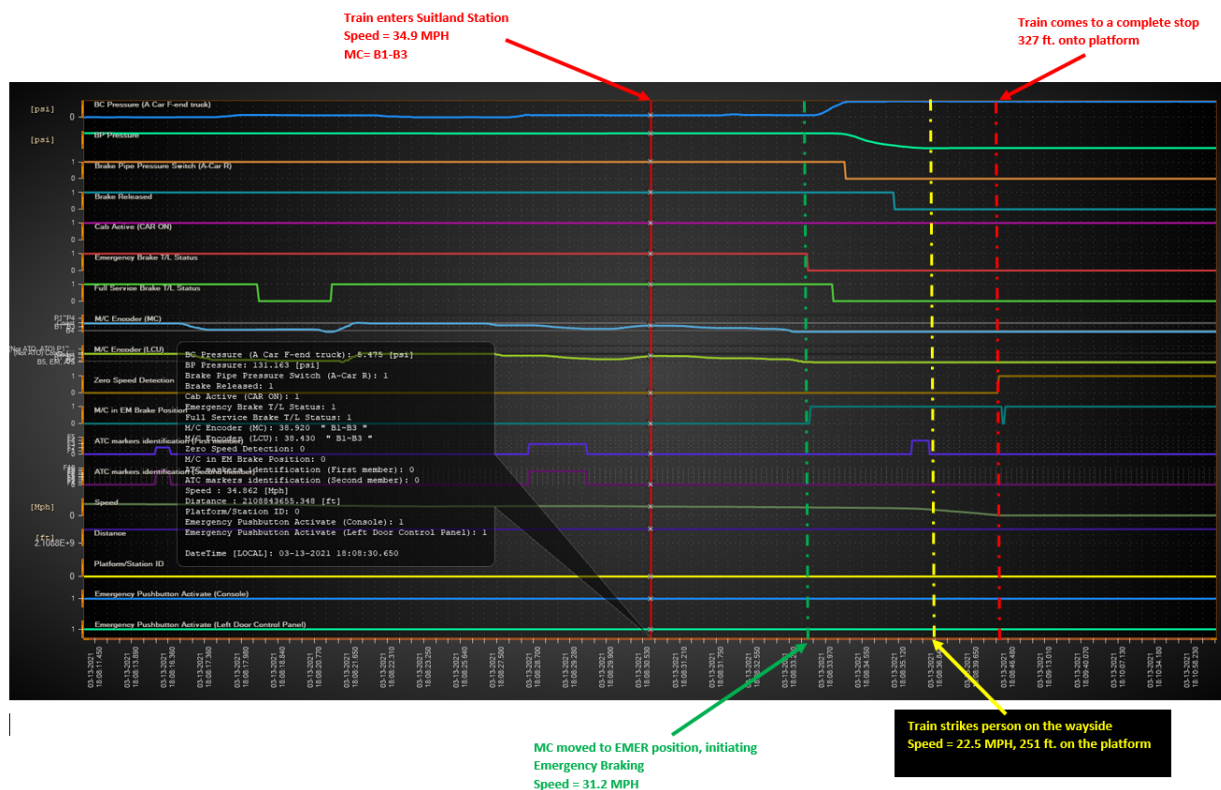


Diagram 3 - ER Graphical Analysis

Office of System Maintenance Communication Section (COMM)

COMM personnel performed a comprehensive radio operational test at Suitland Station, Tracks 1 and 2. The test was successful, and the signal was at an optimal level.

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 investigative interview and identified the following key findings.

During the virtual interview, the Train Operator stated while entering Suitland Station, Track 2, they observed a white object they thought was paper in the middle of the roadway. As they got closer to the unidentified object, it moved. The Train Operator immediately depressed the emergency brake function "mushroom," sounded the horn, and placed the Master Controller in the emergency position, and the train started sliding. The Train Operator reported no discrepancies with the train console or any distractions in the cab area. The Train Operator applied handbrake to the consist, offloaded the consist, and performed a ground walk-around.

The Train Operator stated that the ROCC was contacting them simultaneously to instruct them to stop their train when the consist made contact with the person. The Train Operator reported signs of life and heard the person yelling while underneath the train. The Train Operator indicated there were no mechanical discrepancies with the train. Additionally, the Train Operator indicated the Suitland Station Manager notified the ROCC that the CCTV in the Suitland Station kiosk revealed that a person entered the roadway.

Findings

- The Closed-Circuit Television (CCTV) and Network Video Recording (NVR), Forward-Facing Camera was unavailable due to the MTPD criminal investigation.
- The AIMS display shows that third rail power was de-energized at Suitland Station, Track 2
- MTPD report revealed base on CCTV playback, the person appeared to have tripped and subsequently fell on the roadway in front of the incoming Train ID 508.
- MTPD report revealed the person fell on the roadway at 17:57 hours. Per ARS playback, the Train Operator reported a collision event at 18:08 hours. This indicated that the person was on the roadway for 11 minutes before they were struck.
- Based on a post-incident station inspection, SAFE did not identify any slip or trip hazards that may have contributed to this event.
- Based on ARS playback, it appeared that the ROCC Radio RTC and the RTRA Forward Liaison allowed the fire department to enter the roadway to extricate the person without hot-sticking and confirming third rail power was de-energized. However, the MTPD report revealed they confirmed third rail power was de-energized and placed a WSADs on the roadway to ensure scene safety at the direction of PGCFD.
- Based on ARS, CMNT Road Mechanic personnel performed an under-car visual inspection and identified a broken TWC Antenna on Car 7512. CMNT personnel secured the broken TWC Antenna and deemed the consist safe for movement.
- Based on ARS, ERT notified the ROCC and confirmed a good visual track inspection, and reported that all personnel were clear of the roadway.
- During the virtual interview, the Train Operator reported feeling alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Weather

At the time of the incident, NOAA recorded the temperature at 52°F with passing clouds and 26% humidity. (Weather source: National Oceanic Atmospheric Administration – Location: Suitland, MD.)

Human Factors

Fatigue

The Train Operator's 30-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.

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 and 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 for the Train Operator. The incident time of the day did not suggest an increased risk of fatigue-related impairment. The employee was awake 8.45 hours at the time of the incident. The employee reported 9 hours of sleep on a usual workday and reported 12.5 hours of sleep in the 24 hours preceding the incident. The off-duty period was 18.9 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 WebSFC) 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

Probable Cause Statement

The probable cause of the Person Struck by Train at Suitland Station event on March 13, 2021, was the person's inability to remain on the station's platform. The person appeared unsteady on their feet while walking on the platform and subsequently fell onto the roadway, unintentionally placing themselves within the train's dynamic envelope.

An analysis of data collected from systems of record, interviews with staff, and MTPD 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 appearing to unintentionally fall onto the roadway, fouling the train's dynamic envelope.

Appendix A – MTPD Hot Wash Summary



Metro Transit Police Department Hot Wash Summary



ADMINISTRATION HANDLING INSTRUCTIONS

This report will be completed after a debriefing or "hot wash" in accordance with applicable department policies/directives and procedures; at the request of the Chief of Police or designee or following any incident or event requiring the activation of the Incident Command System (ICS). The purpose of the report is to provide information, assess response, identify training, equipment needs, and to identify areas that may require improvement. After completion of this report, it should be forwarded to the Deputy Chief through the chain of command for review.

This report and any attachments are classified as For Official Use Only. This report may be used for emergency incidents, special events, and exercises. **Items marked with an asterisk (*) will be completed by the last official designated as the Incident Commander (IC) as there may be more than one IC during the incident.**

INCIDENT SUMMARY			
Incident Requiring ICS Activation:		Person Struck by a Train Suitland Metro Station	
*Incident Commander (IC):		PG County [REDACTED]	
MTPD CCN:	2021-01130	Local CCN:	None
*Date ICS Initiated:	03/13/2021	*Time ICS Initiated:	1819 Hrs
*Date ICS Terminated:	03/13/2021	*Time ICS Terminated:	1846 Hrs
*Duration of Incident:	1811-2046 Hrs 2 Hrs 35 Min	*Service Disrupted (Type and Time):	Single Tracking 1811- 2046 Hrs
Incident Location:	SUIT Metro Station	Command Post Location:	SUIT Metro Bus Bay
MTPD On-Scene Commander (OSC):	[REDACTED]	Command Aid for OSC:	[REDACTED]
Forward Liaison:	[REDACTED]	Unified Command:	Yes
OCC Liaison:	[REDACTED]	Alternate Channel:	MTPD 2x
Single Tracking (Time & Track No.):	1811- 2046 Hrs Track 1	Bus Bridge Established (From /To):	NO
Inner and/or Outer Perimeter:	Outer Perimeter	Power De-energized:	Yes
OSC Relinquished Scene Command to Name [REDACTED] Dept: Rail	1955 Hrs Turned over to Rail Supervisor [REDACTED]	Medical Attention Required/Requested:	Required Transported to Prince Georges Hospital Center
Entry/Exit Log:	Yes	CID Response:	Yes

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The information in this document marked FOUO is the property of the Washington Metropolitan Area Transit Authority's Metro Transit Police Department (MTPD) and may be distributed within the Federal Government (and its contractors) to law enforcement, public safety and protection, intelligence officials and individuals with a need to know. Distribution to other entities without prior MTPD authorization is prohibited. Precautions shall be taken to ensure this information is stored and destroyed in a manner that precludes unauthorized access. Information bearing the FOUO marking may not be used in legal proceedings without prior authorization from the originator. Recipients are prohibited from posting information marked FOUO on a website or unclassified network.

Attachment 1 – Page 1 of 3.

Metro Transit Police Department Hot Wash Summary

WMATA ON-SCENE PERSONNEL		
Name	Department/Office	Title/Role
[REDACTED]	MTPD Watch Commander	MTPD OSC
[REDACTED]	MTPD/ District 2	MTPD Command Aid
[REDACTED]	MTPD/ District 2	MTPD Forward Liaison
[REDACTED]	MTPD/ District 2	Scene Assistance
[REDACTED]	MTPD/ District 2	Scene Assistance/Perimeter
[REDACTED]	MTPD/ District 2	Scene Assistance/Perimeter
[REDACTED]	MTPD/ District 2	First on Scene/ Reporting Officer
[REDACTED]	MTPD/ District 2	Entry/Exit Log
[REDACTED]	MTPD/ District 2	CSS
[REDACTED]	MTPD CID	Investigation
[REDACTED]	MTPD CID	Investigation
[REDACTED]	BRAV Yard	Command Post Rail Liaison
[REDACTED]	GNBT Yard	Forward Liaison Rail Liaison

EXTERNAL ON-SCENE PERSONNEL		
Name	Agency/Department	Title/Role
[REDACTED]	PG Fire Chief	IC
[REDACTED]	PG Fire Chief	Command Aid for IC
[REDACTED]	PG Fire	Rescue
[REDACTED]	WMATA Safety	Safety
[REDACTED]	WMATA RTRA	Station Manager
[REDACTED]	WMATA PLNT	Custodian/ Clean Up
[REDACTED]	WMATA TRST	Track Inspection
[REDACTED]	WMATA ERT	Emergency Response Team
[REDACTED]	WMATA ERT	Emergency Response Team
[REDACTED]	WMATA ERT	Emergency Response Team
[REDACTED]	WMATA TRPM	Power
[REDACTED]	WMATA TRST	Track Supervisor
[REDACTED]	WMATA RTRA	Taking the train back to the yard

Use separate sheet if additional space is required.

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Attachment 1 – Page 2 of 3.

Metro Transit Police Department Hot Wash Summary

REQUESTS	
*Radio Run Requested (Yes/No):	Yes
If "Yes," location where tape is stored:	Crime Scene
*Digital Video Evidence Unit (DVEU) Video Requested (Yes/No):	Yes
If "Yes," location where video is stored:	Crime Scene

OBSERVATIONS
<ul style="list-style-type: none"> • At 1757 hours a subject fell on the tracks at the Suitland Metro Station and was struck by a train at 1808 hours. MTPD units were dispatched to the call for service of a subject struck by a train on track #2. • DVEU confirmed the events and that the individual appeared to fall on tracks due to intoxication and did not intentionally place himself in harms way. • At 1813 hours [REDACTED] responded to the ROCC. • MTPD CID responded to the scene. • PG Fire and MTPD [REDACTED] arrived on scene. • At 1818 hours the victim was located under the first car of the train. The victim was reported to be awake and alert. • [REDACTED] established incident command at 1819 hours and isolated the train operator in the first rail car. • [REDACTED] confirmed power was down and placed a WSAD on the roadway to ensure scene safety at the direction of the FD. • [REDACTED] assumed on scene command at 1828 hours and [REDACTED] established Forward Liaison. • At 1829 hours Rail Supervisor [REDACTED] arrived on the scene. • The victim was removed from the tracks at 1836 hours, after being brought through the area of refuge. • The victim was transported to PG Hospital Center at 1845 hours, after being assessed at the hospital the victim transported to Baltimore Shock Trauma for further treatment. • At 1841 the Fire Department cleared the scene and turned the scene over to [REDACTED] • CSS [REDACTED] conducted preliminary photographs of the scene. • Once initial crime scene was completed, Car maintenance personnel secured a broken antenna on the front of the lead train car. • The roadway was cleared from personnel and equipment and third rail power was energized. • [REDACTED] accompanied by [REDACTED] moved the train to BRAV rail-yard to await final processing. • Scene processing was completed at 1912 hours which included photographs and evidence collection from the track bed. The WSADs were removed from the tracks. • At 1955 hours the scene was turned over to RAIL Supervisor [REDACTED] and all MTPD units return to service. • A Hot Wash was completed with MTPD and RTRA.

Use separate sheet if additional space is required.

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Attachment 2 – Page 3 of 3.

Appendix B – CMNT Work Order Details



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

Page 1 of 2
MX76PROD

Work Order #: 16214994
Type: CM



Status: COMP
03/15/2021 21:19

Work Description: Customer fell to the roadway at Suitland Station track 2., 15/78, F10, PUB, JUMP, 508
Job Plan Description:

Train 508 struck a customer that fell to the roadway at Suitland track 2.

Work Information			
Asset: R7512	7512, RAIL CAR, KAWASAKI, 7000 AC, A CAR	Owning Office: CMNT-CMNT-CMNT	Parent:
Asset Tag: R7512		Maintenance Office: CMNT-ALEX-INSP	Create Date: 03/13/2021 21:41
Asset S/N: 7512		Labor Group: CMNT	Actual Start: 03/13/2021 21:42
Location: 1213	C99, ALEXANDRIA YARD	Crew:	Actual Comp: 03/15/2021 21:19
Work Location: 1230	D99, NEW CARROLLTON YARD	Lead:	Item: K18050001
Failure Class: CMNT001	RAIL CAR	GL Account: WMATA-02-33350-50499160-041-*****OPR**	
Problem Code: 1025	ACCIDENT/COLLISION/DERAIL	Supervisor: [REDACTED]	Target Start:
Requested By:		Requestor Phone: [REDACTED]	Target Comp:
Chain Mark Start:		Chain Mark End:	Scheduled Start:
Create-Mileage: 251510.0		Complete-Mileage: 251790.0	

Task IDs						
Task ID						
10	Complied with all of the recommendations. Performed successful MC encoder test. Ops check okay. Checked brake rates. CST: 0.0 B1: 9.9 B2: 18.17 B3: 24.24 B4: 34.34 B5: 44.44 EM: 45.45 Visually Checked undercar for any damages. TWC antenna is damaged and needs to be replaced. NFW. 000-300-D10 PROPULSION: OTHER UNDERCAR EQUIPMENT; 2K/3K/6K/7K					
	Component:	Work Accom:	Reason:	Status:	Position:	Warranty?:
20	R/R'd TWC antenna and performed successful DST. Okay to transfer to NC for cleaning. NFW. 000-300-S37-001 ATS ANTENNA (TWC TRANSMIT-FRONT OF CAR); 7K					
	Component:	Work Accom:	Reason:	Status:	Position:	Warranty?:
30	CLEANED UNDERCAR OF BOTH CARS 000-300-B01 CAR BODY: UNDER CAR STRUCTURE GROUP; 2K/3K/6K/7K					
	Component:	Work Accom:	Reason:	Status:	Position:	Warranty?:

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03/16/2021 07:49

Attachment 2 – Page 1 of 2.



Washington Metropolitan Area Transit Authority
Maintenance and Material Management System

Page 2 of 2
MX76PROD

Work Order #: 16214994
Type: CM

Work Order Details



Status: COMP
03/15/2021 21:19

Work Description: Customer fell to the roadway at Suitland Station track 2., 15/78, F10, PUB, JUMP, 508
Job Plan Description:

Actual Labor									
Task ID	Labor	Start Date	End Date	Start Time	End Time	Approved?	Regular Hours	Premium Hours	Line Cost
10		03/14/2021	03/14/2021	06:30	07:30	Y	01:00	00:00	\$25.05
10		03/14/2021	03/14/2021	06:30	07:30	Y	01:00	00:00	\$40.08
20		03/15/2021	03/15/2021	06:30	13:00	Y	06:30	00:00	\$260.54
20		03/15/2021	03/15/2021	06:30	13:00	Y	06:30	00:00	\$168.05
30		03/15/2021	03/15/2021	20:00	21:00	Y	01:00	00:00	\$34.38
Total Actual Hour/Labor:							16:00	00:00	\$528.90
Related Incidents									
Ticket	Description				Class	Status	Relationship		
8528884	Customer fell to the roadway at Suitland Station track 2., 15/78, F10, PUB, JUMP, 508				SR	RESOLVED	ORIGINATOR		
Failure Reporting									
Cause	Remedy				Supervisor			Remark Date	
1929	FOREIGN OBJECT DAMAGE 0004 REPLACED							03/15/2021	
Remarks: VERIFIED THE REPORTED FAILURE. REPLACED THE TWC ANTENNA (PART FROM MRO) UNDERCAR CLEANING PERFORMED.									

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Attachment 2 – Page 2 of 2.

Appendix C – Interview Summary

Office of Rail Transportation

Train Operator

The Train Operator is a WMATA employee with 12 years and 11 months of service. The Train Operator started as a Bus Operator and has been a Train Operator for eight years. The Train Operator recertified as a Train Operator on February 3, 2021.

Based on the SAFE interview, the Train Operator stated while entering Suitland Station, Track 2, they observed a white object they thought was paper in the middle of the roadway. As they got closer to the unidentified object, it moved. The Train Operator immediately depressed the emergency brake function "mushroom," sounded the horn, and placed the Master Controller in the emergency position, and the train started sliding. The Train Operator reported three cars on the platform, and there were no discrepancies with the train console or any distractions in the cab area. The Train Operator applied handbrake to the consist, offloaded the consist, and performed a ground walk-around. The Train Operator stated that ROCC was contacting them simultaneously to instruct them to stop their train when the consist made contact with the person. The Train Operator reported signs of life and heard the person yelling while underneath the train. The Train Operator indicated there were no mechanical discrepancies with the train. Additionally, the Suitland Station Manager notified the ROCC that the CCTV in the Suitland Station kiosk revealed that a person was on the roadway and asked them to de-energize the power.