



WMSC Commissioner Brief: W-0250 – Collision – Gallery Place-Chinatown Station – May 12, 2023

Prepared for Washington Metrorail Safety Commission meeting on December 12, 2023

Safety event summary:

On May 12, 2023, a Green Line train made contact with a person who intentionally entered the roadway at Gallery Place-Chinatown Station. The Train Operator was able to stop the train as it approached the person, leading to the train making only slight contact with the individual.

The Train Operator of Train 505 observed the person on the roadway as their train entered Gallery Place-Chinatown Station on Track 1. The train was travelling 37 mph, below Metrorail's 40-mph maximum station entry speed. The Train Operator correctly applied emergency braking. Data show that the Train Operator released the Deadman control, initiating emergency braking. The train stopped after travelling another 87 feet.

The Train Operator notified the Radio Rail Traffic Controller in the Rail Operations Control Center (ROCC) of the event. The person exited the roadway unassisted and left the station. This contributed to the Train Operator's impression from the operating cab that the train had not actually made contact with the individual.

Metro Transit Police Department (MTPD) personnel later located the person, who did not sustain any significant injuries, outside the station. The person told MTPD personnel that the train did make contact with them, but the train did not run over them. The person had intentionally entered the roadway. MTPD personnel requested medical assistance from D. C. Fire and Emergency Medical Services. The person was transported to a hospital.

After the Train Operator reported the emergency, the Radio Rail Traffic Controller notified the Assistant Operations Manager who instructed the Controller to have an Office of Rail Transportation Supervisor relieve the Train Operator. The Radio Rail Traffic Controller asked the Train Operator if they were able to continue operation of the train. The Train Operator stated they were okay to continue and operated the train for six additional stations stops before being relieved by an Office of Rail Transportation Supervisor when the train arrived at Fort Totten Station as the investigation continued. The Train Operator was removed from service for post-incident toxicology testing and interviewed by Metro Transit Police Department (MTPD) personnel as part of further investigation.

The train was removed from service. An inspection of the train found slight damage consistent with a collision. Video supported that the train did make contact with the person on the roadway.

Probable Cause:

The probable cause of this event was a person intentionally entering the roadway.

WMSC staff observations:

The Train Operator was appropriately focused on their duties and reacted in the necessary manner to preserve the life of the person on the roadway.

Metrorail established a documented maximum station entry speed as part of a corrective action plan to address WMSC findings related to station overruns and proper control of trains.



Washington Metropolitan Area Transit Authority
Department of Safety (SAFE)
Office of Safety Investigations (OSI)
FINAL REPORT OF INVESTIGATION A&I E23325

Date of Event:	May 12, 2023
Type of Event:	Collision
Incident Time:	11:55 hours
Location:	Gallery Place Station, Lower
Time and How received by SAFE:	11:55 hours MAC Desk
WMSC Notification Time:	13:30 hours
Responding Safety Officers:	None
Rail Vehicle:	Train ID 505 (3103-3104 -3062-3061-3072-3072-3071)
Injuries:	None
Damage:	None
Emergency Responders:	MTPD
SMS I/A Number	20230512#108458

Gallery Place Station – Collision

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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 the Chief Mechanical Officer
IIT	Incident Investigation Team
MSRPH	Metrorail Safety Rules and Procedures Handbook
MTPD	Metro Transit Police Department
NOAA	National Oceanic and Atmospheric Administration
RTC	Rail Traffic Controller
RTRA	Office of Rail Transportation
ROCC	Rail Operations Control Center
SAFE	Department of Safety
SMS	Safety Measurement System
TRST	Office of Track and Structures
VMS	Vehicle Monitoring System
WMATA	Washington Metropolitan Area Transit Authority
WMSC	Washington Metrorail Safety Commission

Executive Summary

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

On May 12, 2023, at 11:55 hours, Train ID 505, an outbound Green line train, entered Gallery Place Station on track 1 at 37 mph. The Train Operator observed an individual in the roadway between the running rails and immediately entered a braking mode and applied the emergency brake in an attempt to avoid striking the individual. After coming to a stop, the Train Operator immediately contacted the ROCC to inform them of the situation and repeatedly stated they did not contact the person. Shortly after the train came to a complete stop, the individual removed themselves from the roadway and exited the station. The individual was then apprehended and detained by the Metro Transit Police Department (MTPD). An inspection of the train found minor damage consistent with a collision event; however, the person did not receive significant injuries.

The probable cause for this collision was the intentional action of the person to trespass onto the rail right-of-way as Train ID 505 entered the platform limits.

Incident Site

Gallery Place Station, Track 1 – center platform configuration on the lower level. The station serves as a Red, Green, and Yellow Lines transfer point.

Field Sketch/Schematics

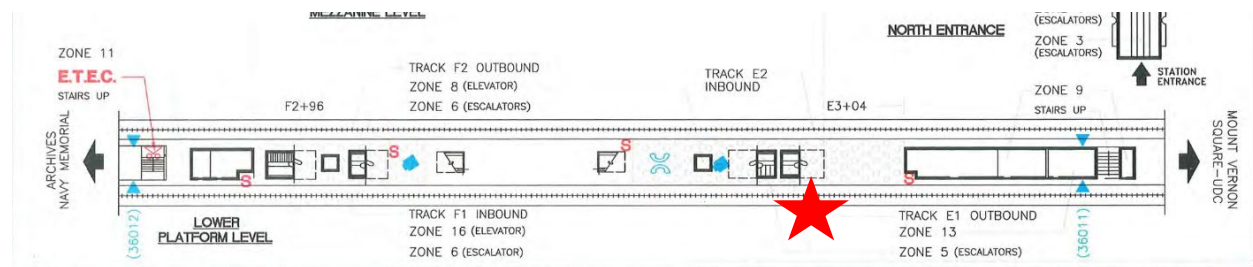


Figure 1: This image shows the approximate location where the person was struck by the train. The above depiction is not to scale.

Purpose and Scope

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

Investigative Methods

The investigative methodologies included the following:

- Physical Site Assessment through document review.
- Formal Interview – SAFE interviewed one individual as part of this investigation. The interview included a person present at, during, and after the incident and representatives from the Washington Metrorail Safety Commission (WMSC). SAFE interviewed the following individual:

- Train Operator
- Documentation Review – Collection of relevant work history information and process documentation contained in WMATA systems of record. These records include:
 - Train Operator Training Records
 - Train Operator Certifications
 - Train Operator 30-Day work history review
 - Metrorail Safety Rules and Procedures Handbook (MSRPH)
 - National Oceanic and Atmospheric Administration (NOAA)
 - Rail Operations Control Center (ROCC) Incident Report
 - Maximo Data
 - MTPD Police Report
- System Data Recording Review – Collection of information contained in Metro Data Recording Systems. This data includes:
 - ARS (Audio Recording System) playback [Radio: Ops. 3, MTPD 1X, Telephone: Rail 2]
 - The Office of Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT)
 - Vehicle Monitoring System (VMS)
 - Closed-Circuit Television (CCTV)
 - OpenMHz

Investigation

On May 12, 2023, at 11:55 hours, Train ID 505, an outbound Green Line train, entered Gallery Place on track 1 with the Master Controller in a B2 braking position. The Train Operator stated they noticed an individual in the roadway between the running rails a few seconds after entering the station. The CMOR IIT data revealed that the Train Operator immediately released the Deadman control, initiating emergency braking and dumping the brake pipe, reducing the speed to 21 mph. At that point, the train was approximately 242 feet from the 8-car marker. The train came to a complete stop 155 feet from the 8-car marker.

At 11:57 hours, the Train Operator contacted the ROCC to inform them that upon entering the station, there was a person in the roadway between the running rails. The Train Operator repeatedly stated that they did not make physical contact with the person. During the communication with the Radio RTC, the Train Operator was asked multiple times if they were okay to continue, to which they responded affirmatively. However, the Train Operator was relieved by a Rail Supervisor at Fort Totten Station.

Shortly after the train came to a complete stop, the individual left the roadway under their own power and exited the station. At 12:02 hours, MTPD Dispatch radioed officers stationed at Gallery Place about a report of a person in the roadway on the lower level. Officers responded, but by that time, the individual had already left the station. At 12:21 hours, an MTPD Officer notified MTPD Dispatch that they located the person at 7th & H St Northwest. The individual was apprehended by MTPD.

During questioning by MTPD, the individual mentioned feeling depressed and experiencing suicidal thoughts. They also stated that the train made contact with them, causing them to fall, but clarified that the train did not run over them. At 12:24 hours, an ambulance was dispatched to the scene, and the individual was transported to the hospital for further evaluation and treatment.

The incident train was removed from service so the vehicle monitoring system data could be downloaded. An evaluation of the train's recorded data systems found that the Train Operator responded appropriately and was in compliance with speed restrictions while entering a station. There were no mechanical defects found with the vehicle.

Chronological Event Timeline

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

Time	Description
11:57:37 hours	<u>Train Operator</u> : Contacted the Radio RTC to report that there was a person in the roadway as they entered the station. The Train Operator stated they guessed the person hit the ground, but they did not make contact. The person got up and headed up the escalator. <u>Radio RTC</u> : Gave a 100% repeat back and asked the Train Operator if they were okay to continue. [Ops. 3]
11:58:20 hours	<u>Buttons RTC</u> : Notified the Assistant Operations Manager of what the Train Operator reported. The Assistant Operations Manager advised having a Rail Supervisor relieve the Train Operator. [Rail 2]
11:59:34 hours	<u>Radio RTC</u> : Instructed a Rail Supervisor to cushion toward Train ID 505 to relieve the Train Operator. [Ops. 3]
12:02:41 hours	<u>MTPD Dispatch</u> : Contacted an MTPD Officer to inform them that the ROCC reported there was an individual in the roadway on the lower level and they didn't have a lookout at the time. [MTPD 1x]
12:09:28 hours	<u>Buttons RTC</u> : Informed the Assistant Operations Manager that MTPD had the person. [Ext. 12061]
12:17:40 hours	<u>Radio RTC</u> : Contacted the Rail Supervisor, who advised them they were operating Train 505, and the Train Operator got off the train at Ft. Totten Station. [Ops. 3]
12:18:12 hours	<u>MTPD</u> : Contacted DVEU to review footage at Gallery Place Station to see if the person was struck by the train. [Phone]
12:21:08 hours	<u>MTPD Officer</u> : Contacted the Dispatch to request additional units because they thought they located the person at 7 th & H St that matched the description of the person in the tracks. [MTPD 1x]
12:23 hours	Ambulance 16 was dispatched to 7 th & H St NW. [Open MHz]
12:24:38 hours	<u>MTPD Officer</u> : Provided the Dispatch with the person's name and DOB. [MTPD 1x]
12:50:34 hours	<u>MTPD Officer</u> : Advised that the suspect was being transported to the hospital. [Phone]

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

The Office of Chief Mechanical Officer (CMOR) / Vehicle Monitoring System (VMS)

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

“Based on VMS data, Train ID 505, with Lead Car 3103 entered into Gallery Place station, traveling at 37 MPH. The Deadman emergency Brake function was initiated 358 feet into Gallery Place Station. The train came to a complete stop 155 feet from the 8-Car marker. A few minutes later, the Master Controller was moved to a P3 power position, and the train moved towards the 8-Car marker, stopping 7 feet shy of the 8-Car marker and servicing the station.

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

See timeline of events below:

Time	Description of Events
11:53:06 hours	Train ID 505, with Lead car 3103, entered into Gallery Place, Track #1, at a speed of 37 MPH, with the Master Controller in the B2 Braking position.
11:53:15 hours	A control safety device released in B2 Braking position, initiating emergency braking and dumping the brake pipe, train speed was 21 MPH, 242 feet from the 8-Car Marker.
11:53:21 hours	The train came to a complete stop 155 feet from the 8-Car marker.
11:55:53 hours	The brake pipe pushbutton was activated, and the brake pipe was recharged.
11:55:58 hours	The Master Controller was placed in the P3 Power position, and the train began to move towards the 8-Car Marker.
11:56:19 hours	The train came to a complete stop 7 feet shy of the 8-Car Marker at Gallery Place Track #1.
11:56:25 hours	The Left Door Open Pushbutton was activated, and the Left Doors opened.
11:56:44 hours	The Left Door Close Pushbutton was activated, and Left Doors Closed.
11:56:58 hours	The Master Controller was placed in the P5 Power position, and the train began to move in the direction of Greenbelt.

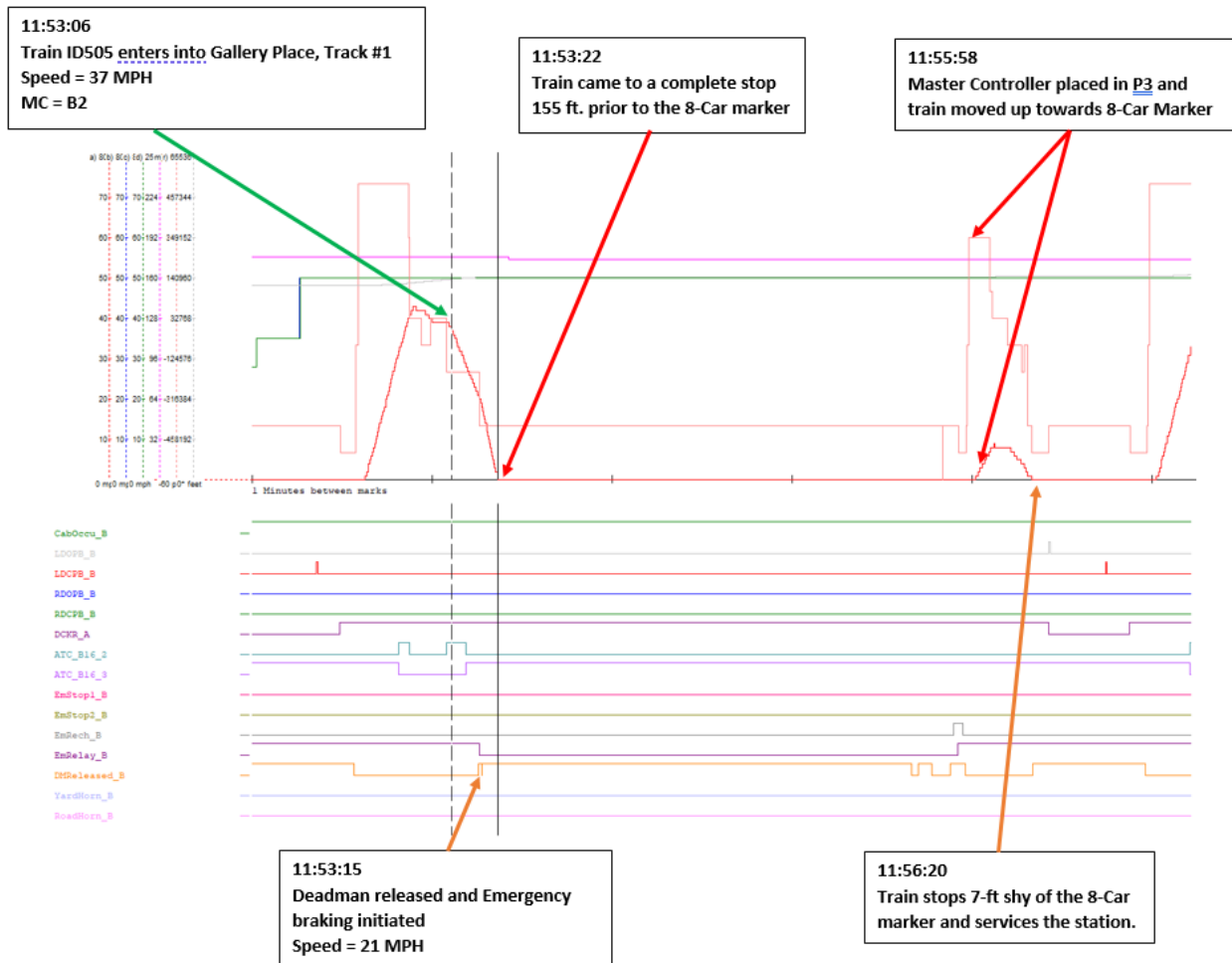


Figure 2 - Graphical Representation of Train Data from Car 3103

Office of Rail Transportation (RTRA)

Adopted from RTRA report:

Per the RTRA Incident Managerial report, the Train Operator stated, “At 11:51 am at track one Gallery Place I was entering the station when I saw a man standing on the track about the middle point of the platform. At that time, I pressed the emergency stop button and stopped the train. I did not make contact with the man. He then got up on the platform and went up the escalator.” The report noted, “Upon viewing the video footage, the Operator was unsuccessful stopping the train, resulting in the train making contact with Trespasser Wayside.”

This Train Operator has had one prior incident in 2019 for a SOP 40 & 7K Manual Door Procedure violation.

Interview Findings

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

The Train Operator stated that it was their first-round trip after a scheduled break when the incident occurred. The Train Operator confirmed that there were no mechanical issues with the train and reported that they were paying full attention leading up to the event.

According to the Train Operator, they observed the individual in the roadway as they were entering Gallery Place Station. They promptly initiated braking procedures and utilized the emergency brake to prevent a collision with the individual. The Train Operator emphasized that they never believed they had made contact with the person and were not notified of any such contact. They mentioned not feeling any impact or sensation that would indicate contact with the individual.

Additionally, the Train Operator reported witnessing the individual removing themselves from the roadway and proceeding up the escalator as if nothing had happened. Subsequently, a Rail Supervisor relieved the Train Operator at Fort Totten Station. The Train Operator then traveled back to Greenbelt Yard where they underwent an interview with MTPD.

Weather

On May 12, 2023, at the time of the incident, NOAA recorded the temperature as 75° F, with mostly clear skies. This event occurred within a tunneled section of the rail system. Weather did not contribute to this incident (Weather source: NOAA) – Location: Washington, DC).

Human Factors

Fatigue

Signs and Symptoms of Fatigue

We evaluated conditions at the time of the incident to distinguish whether evidence of fatigue was present. No video of the involved person was available to ascertain whether evidence of fatigue was present. 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

We evaluated incident data for fatigue risk factors. No significant risk was identified. The incident time of day did not suggest an increased risk of fatigue-related impairment. The Train Operator reported keeping a regular sleep schedule in the days leading up to the incident. The Train Operator worked the day shift in the days leading up to the incident. The Train Operator was awake for 8.4 hours at the time of the incident. The Train Operator reported 8.5 hours of sleep in the 24 hours preceding the incident. The off-duty period was 12.75 hours which provides an opportunity for 7-9 hours of sleep. This was a comparable amount of sleep as the Train Operator's usual workday sleep durations. The Train Operator reported no issues with sleep.

Post-Incident Toxicology Testing

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

Findings

- The Train Operator entered the station at 37 mph, which is below the maximum authorized speed of 40 mph.
- The Deadman emergency brake function was activated 358 feet into Gallery Place Station.
- The train came to a complete stop 155 feet from the 8-car marker.
- The person involved in the incident exited the roadway on their own and subsequently exited the station.
- The Metro Transit Police Department (MTPD) apprehended the person following the incident.
- In their interaction with MTPD, the person conveyed that they were struck by the train, resulting in them falling backwards.

Immediate Mitigation to Prevent Recurrence

- The Train Operator involved in the incident was removed from service.
- The Train was removed from service to facilitate the download and analysis of VMS data.

Probable Cause Statement

The probable cause for this collision was the intentional action of the person to enter onto the rail right-of-way.

Recommended Corrective Actions

There are no Recommended Corrective Actions associated with this event. The personnel involved performed within operating rules and procedures and equipment performed as designed.

Appendices

Appendix A – Interview Summary

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

The Train Operator is a WMATA employee with ten (10) years of service, with five (5) years as a Train Operator. The Train Operator previously worked as a Bus Operator. The Train Operator was last recertified as a Train Operator in December 2022. The Train Operator is RWP Level 2 certified and must recertify in March 2024. The Train Operator mentioned feeling fully alert right before the event. The Train Operator was working day shifts leading up to the event. The Train Operator stated they had no personal circumstances interfering with their opportunity to get good sleep. The Train Operator has a 25-minute drive to work.

During the interview, the Train Operator stated they were completing their first-round trip after their scheduled break when this incident occurred. The Train Operator stated they did not experience any mechanical issues with the train or any mental lapses prior to the incident. The Train Operator stated as they were entering Gallery Place Station, they noticed the individual in the roadway. The Train Operator stated that they immediately started braking and used the emergency brake to stop the train from hitting the individual. The Train Operator mentioned that they did not think they hit the individual, nor were they notified of contacting the individual. The Train Operator mentioned they did not feel a thump or anything that would indicate they had contacted the person. The Train Operator stated they saw the individual remove themselves from the roadway and go up the escalator as if nothing happened. The Train Operator was relieved by an RTRA Supervisor at Fort Totten Station. The Train Operator traveled back to Greenbelt Yard, where they were interviewed by MTPD.

Appendix B – Office of Rail Transportation Managerial Report



Washington Metropolitan Area Transit Authority



Office of Rail Transportation: Managerial Incident Investigation Report

Incident Status: **PRELIMINARY**

GENERAL INCIDENT INFORMATION

Incident Type:	Collision	Delay (Minutes):	0 minutes
Incident Date:	Friday, May 12, 2023	Vehicles Involved:	L3103-3062-3071
Incident Time:	12:00 pm	First Reported By:	[REDACTED]
Location:	Gallery Place (Grn\Yel Line) #1		

BRIEF DESCRIPTION:

At approximately 1200, the train operator on 505 reported a customer standing on the roadway after entering the station. Once the train came to a complete stop, the customer crawled underneath the train and then he crawled out, returned to the platform and exited the station. He is in MTPD custody. Division Management was notified, and the train operator will be removed from service.

Key Employees Involved & Employee Statements:

Train [REDACTED] - wrote in his incident report and was interviewed by Assistant Superintendent [REDACTED]. During this interview, Train Operator stated the following:

"At 11:51am at track one gallery place I was entering the station when I saw a man standing on the track about the middle point of the platform. At that time, I pressed the Emergency Stop button and stopped the train. I did not make contact with the man. He then got up on the platform and went up the escalator."

Post Incident Testing & Employee History:

Operator [REDACTED] was removed from service and transported for Post Incident Testing.
Operator [REDACTED] has been a WMATA employee since Oct 15, 2013.
Operator [REDACTED] has been on the Rail since Jun 24, 2018.
Operator [REDACTED] last certified as a Train Operator on Dec 13, 2022 (QL-1).
Operator [REDACTED] has had one (1) SOP 40 & K Manual Door Procedure violation that occurred on,
• Apr 8, 2019 at Federal Center track #2.



Washington Metropolitan Area Transit Authority



Office of Rail Transportation: Managerial Incident Investigation Report

SIGNIFICANT INCIDENT TIMELINE:

11:53:06.480 Train ID505, with Lead car 3103, enters into Gallery Place, Track #1, at a speed of 37 MPH, with the Master Controller in the B2 Braking position
11:53:15.304 Deadman released in B2 Braking position, initiating emergency braking and dumping the brake pipe, train speed was 21 MPH, 242 ft. from the 8-Car Marker.
11:53:21.765 Train came to a complete stop 155 ft. from the 8-Car marker.
11:55:53.684 Brake Pipe Pushbutton activated and Brake pipe is recharged .
11:55:58.736 Master Controller is place in the P3 Power position, and train begins to move towards the 8-Car Marker.
11:56:19.612 Train comes to a complete stop 7 ft. shy of the 8-Car Marker at Gallery Place Track #1
11:56:25.336 Left Door Open Pushbutton activated, and Left Doors open
11:56:44.292 Left Door Close Pushbutton activated and Left Doors Close.
11:56:58.840 Master Controller is place in the P5 Power position, and train begins to move in the direction of Greenbelt.

SIGNIFICANT FINDINGS & PENDING ISSUES:

Upon viewing the video footage, the operator was unsuccessful stopping the train, resulting in the train making contact with Trespasser Wayside.

CORRECTIVE ACTIONS:

N/A

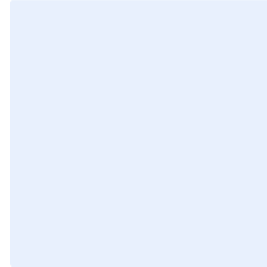
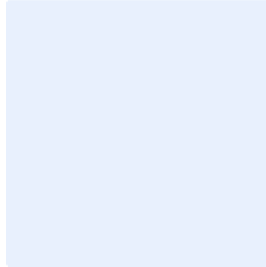


Washington Metropolitan Area Transit Authority



Office of Rail Transportation: Managerial Incident Investigation Report

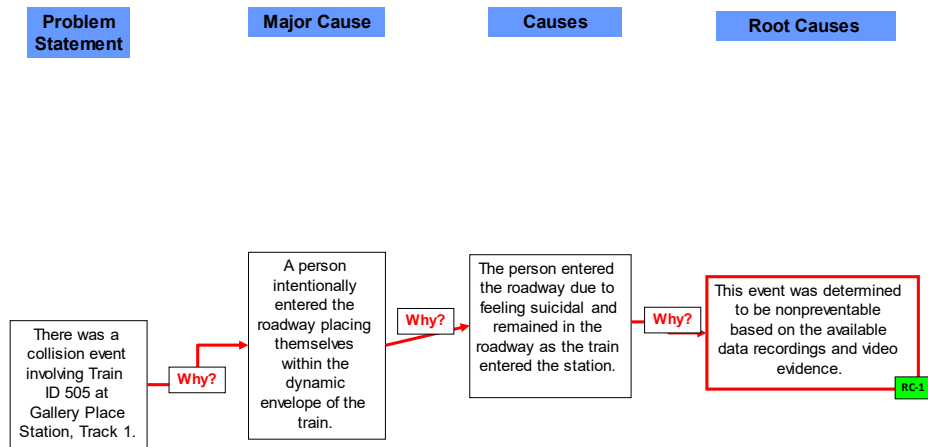
INCIDENT PHOTOS: ATTACH ANY SIGNIFICANT PHOTOS BASED ON THE INITIAL INCIDENT INVESTIGATION.



Report Prepared
by: Assistant Superintendent [REDACTED]

Report Reviewed
by: _____

Appendix C – Why-Tree Analysis



Root Cause Analysis

