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WMSC Commissioner Brief: W-0056 – Improper RWP near Fort Totten Station – August 22, 2020

Prepared for Washington Metrorail Safety Commission meeting on January 26, 2021

Safety event summary:

A WMATA Infrastructure Renewal Program Group (IRPG) Construction Inspector at Fort Totten Station went to the upper-level platform and entered the Red Line roadway without any protection in place.

The inspector was attempting to join a work crew that was replacing standpipes on the Green and Yellow Line roadway on the lower level, but instead walked outbound on the Red Line. The crew had started work at approximately 6:00 p.m., and this inspector arrived to join the crew (made up of Plant Maintenance and IRPG personnel) at 10:05 p.m.

The inspector, who was current with the highest level of Roadway Worker Protection training (RWP Level IV), stated they were not aware that Fort Totten was a transfer station with two different platform levels.

The inspector did not use their radio, did not conduct a radio check and instead again used a cell phone to contact the work crew.

The work crew had initially provided instructions over the phone that the Roadway Worker In Charge (RWIC) described in an interview as not being clear. Cell phones are not permitted on the roadway under rule 5.03.

Metrorail rules require the use of radios to access the roadway, but the inspector stated that they sometimes use a phone to seek that approval instead.

The inspector went to the Red Line platform, entered the roadway using the end gate, and walked between the two tracks then crossed over Track #1 and walked along the fence line.

A Train Operator departing Fort Totten Station identified the inspector as an unauthorized individual on the roadway when the train approached the inspector from behind approximately five minutes after the inspector had entered the roadway. The inspector gave the Train Operator a proceed signal, but the inspector did not use their radio, did not conduct a radio check and instead again used a cell phone to contact the work crew after seeing that a chain marker indicated the location was the B (Red) Line rather than the E (Green/Yellow) Line.

The train operator reported the person on the roadway to the Rail Operations Control Center, which then had the inspector board the train.

The work crew stopped work after the event to review proper procedures.

Probable Cause:

This event was the result of communications breakdowns, insufficient system familiarization, and a general acceptance of non-adherence to written Metrorail rules, procedures or processes.

Corrective Actions:

Metrorail developed a Lessons Learned document for IRPG personnel focused on transfer stations, and provided the employee who entered the roadway with RWP refresher training.

WMSC staff observations:

This event suggests that WMATA may not provide sufficient territory familiarization for employees. WMATA should consider providing such familiarization at a sufficient level of detail.

The investigation also demonstrates that Metrorail has allowed procedures to be ignored, including what was described as a use of cell phones to get permission to access established work zones when use of a WMATA radio is required.

Staff recommendation: Adopt final report.

Washington Metro Area Transit Authority

Department of Safety and Environmental Management (SAFE)

FINAL REPORT OF INVESTIGATION A&I E20310

Date of Event:	8/22/2020
Type of Event:	Improper Roadway Worker Protection (RWP)
Incident Time:	22:25 hrs.
Location:	Fort Totten Station
Time and How received by SAFE:	22:27 hrs., On-Call Phone
WMSC Notification Time:	23:47 hrs.
Rail Vehicle:	N/A
Injuries:	None
Damage:	None
SMS I/A Incident Number:	20200824#88534

Fort Totten Station – Improper RWP
August 22, 2020

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Abbreviations and Acronyms

ARS	Audio Recording System
CCTV	Closed Circuit Television
CM	Chain Marker
FT	Foul Time
RJSB	Roadway Job Safety Briefing
IRPG	Infrastructure Renewal Program Group
MSRPH	Metrorail Safety Rules and Procedures Handbook
MTPD	Metro Transit Police Department
NOAA	National Oceanic Atmospheric Administration
PLNT	Plant Maintenance Department
RWP	Roadway Worker Protection
ROCC	Rail Operations Control Center
RSA	Revenue Service Adjustment
RTRA	Office of Rail Transportation
RWIC	Roadway Worker In Charge
SAFE	Department of Safety and Environmental Management
WMATA	Washington Metropolitan Area Transit Authority

Executive Summary

On Saturday, August 22, 2020, at approximately 22:25 hrs., an Infrastructure Renewal Program Group (IRPG) Employee entered the roadway at Fort Totten Station (upper level), Track #1, at Chain Marker (CM) B1-284+00 (via the access gate), without permission from the Rail Operations Control Center (ROCC) while attempting to access a worksite on the Green Line at Fort Totten Station (lower level). The IRPG Employee was later discovered by a Train Operator and subsequently removed from service for a safety violation.

Based on investigative findings, after servicing Fort Totten Station, Track #1, the Train Operator of Train ID 114 operating outbound in the direction of Glenmont identified a person giving a proceed signal near the fence line on the roadway. The Train Operator then contacted the ROCC and asked if they had personnel working on the roadway between Fort Totten and Takoma Stations. The ROCC acknowledged Train ID 114 and stated they did not have any authorized personnel on the roadway. ROCC notified Metro Transit Police Department (MTPD) of an unauthorized person on the roadway and MTPD subsequently dispatched MTPD officers. Thereafter, the Train Operator of Train ID 114 identified the unauthorized person as a WMATA Employee and reported findings to ROCC. The ROCC then instructed the Train Operator of Train ID 114 to pick-up the IRPG Employee from the roadway. The IRPG Employee boarded Train ID 114 and was transported to Glenmont Station via train, removed from service by an Office of Rail Transportation (RTRA) Supervisor per ROCC instructions and then transported for post-incident toxicology testing. There were no injuries or damages reported as a result of this incident.

Following the incident, the Roadway Worker In Charge (RWIC) stopped work operations and conducted a Safety Stand-down to discuss MSRPH procedures.

The probable cause of the RWP violation was the IRPG Employee did not verify the work location through review of Revenue Service Adjustment (RSA) for Fort Totten planned work provided by management before entering the incorrect track location. Additionally, the IRPG Employee did not communicate with the ROCC before entering the roadway. As a qualified Level 4 Roadway Worker, the IRPG Employee did not identify the hot spots associated with the work area and did not take the necessary actions to traverse the roadway.

During the investigation, SAFE identified the following issues:

(1) The IRPG Employee entered the roadway without permission from ROCC.

(2) The IRPG Employee did not conduct a radio check prior to entering the roadway.

(3) The IRPG Employee used a cell phone while on the roadway in an attempt to receive directions to the worksite from the IRPG personnel.

(4) The IRPG Employee entered the roadway without full clarification of instructions given for the work location.

As a result of this investigation, SAFE makes the following recommendations:
To IRPG, the IRPG Employee should attend RWP Refresher Training with an emphasis on communications.

To IRPG Management, develop a Lessons Learned with an emphasis on accessing the roadway at transfer stations.

Incident Site

Fort Totten Station, Track #1, Chain Marker (CM) B1-284+00
Transfer station for Green and Red Line Trains

Field Sketch/Diagram

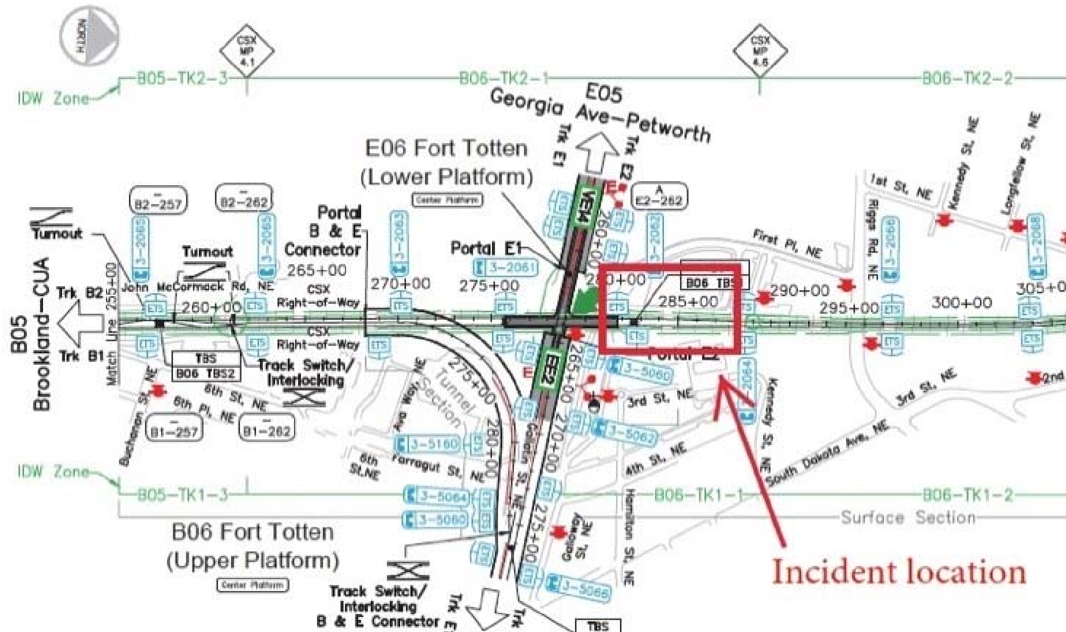

Figure 1: Fort Totten Station, Track #1, Chain Marker (CM) B1-284+00

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.

Investigative Methods

The investigative methodologies included the following:

- Physical Site Assessment
- Formal Interviews – Two individuals were interviewed as part of this investigation. Interviews included persons present at, during, and after the time of the incident, those directly involved in the response process, and managers responsible for the process. The following individuals were interviewed:
    - IRPG Employee
    - RWIC

- Documentation Review – Collection of relevant work history information and process documentation contained in Metro systems of records. These records include:
  - IRPG Employee Training and Certifications
  - IRPG Employee 30-Day work history
  - RWIC's Training and Certifications
  - RWIC's Employee 30-Day work history
  - Metrorail Safety Rules and Procedures Handbook (MSRPH)
  - National Oceanic Atmospheric Administration (NOAA)

- System Data Recording Review – Collection of information contained in Metro Data Recording Systems. This data includes:
  - ARS playback [Radio and Phone Communications]
  - CCTV playback

Investigation

Upon receiving notification from the ROCC of the RWP safety violation on the Red Line, Track #1 at Fort Totten Station, CM B1-284+00, on August 22, 2020, SAFE launched a cross-functional incident investigation into the safety violation. Information gathered by SAFE's investigation is contained within this report.

Based on investigative findings, the RWP safety violation began when the IRPG Employee entered the roadway without receiving permission from the ROCC. According to the Roadway Job Safety Briefing (RJSB) given by the Roadway Worker In Charge, the work crew was replacing standpipes from 18:00 hrs., on August 21, 2020 to 06:00 hrs., on August 22, 2020, Fort Totten Station, Track #1, from CM E1-175+76 to E1-269+40 as part of a (4) four-year tunnel standpipe project on the Yellow/Green Line. Plant Maintenance Department (PLNT) personnel were performing the task of RWICs and IRPG personnel were performing tasks as work crew leaders via RWP Level 4 Inspectors. The IRPG Employee was attempting to join the work crew and arrived at Fort Totten Station at 22:05 hrs. Upon arrival, the IRPG Employee called a member of their work group via cell phone for directions to the work location. As the IRPG Employee attempted to gain entry into the worksite, they accessed the incorrect location and began walking alongside Track #1 on the B-Line in the direction of Takoma Station. While on the roadway, a Train Operator approached the IRPG Employee from the rear near CM B1-284+00, stopped train movement and contacted the ROCC for guidance. The Train Operator was unaware the individual was a WMATA Employee. After positive identification was confirmed, the IRPG Employee boarded the train and was transported to Glenmont Station and subsequently removed from service.

Chronological Event Timeline

Time	Description
22:19:20 hrs.	The IRPG Employee accessed the Red Line roadway via Track #1. [CCTV]
22:20:14 hrs.	The IRPG Employee crossed over from Track #1 to Track #2 and continued to walk in the direction of Takoma Station in between the running rail and fence line. [CCTV]
22:24:46 hrs.	Train ID 114 Train Operator approached the IRPG Employee from behind on Track #1 and reduced speed. [CCTV]

22:25:20 hrs.	Train ID 114 Train Operator asked the ROCC if there are any authorized personnel on the roadway. [Radio]
22:25:32 hrs.	The ROCC confirmed they do not have authorized personnel on the roadway and asked for the current CM. [Radio]
22:26:07 hrs.	The Train Operator of Train ID 114 came to a complete stop on Track #1 and confirmed with ROCC via radio; the unidentified person was on the roadway at CM B1-280+00. [CCTV]
22:26:15 hrs.	The ROCC contacted the Train Operator of Train ID 114 and stated, “attempt a radio check with Employee. The ROCC calls MTPD via telephone to report unauthorized personnel on the roadway. [Radio]
22:27:06 hrs.	The ROCC requested Train ID 109 to conduct a track inspection from Takoma to Fort Totten Stations, Track #1. [Radio]
22:27:41 hrs.	The ROCC instructed Train ID 114 Train Operator to get the unidentified Employee aboard the train and asked for their description. [Radio]
22:28:52 hrs.	Train ID 114 Train Operator reported the Employee was in front of the train near the fence line. [Radio]
22:29:15 hrs.	The ROCC instructed Train ID 114 Train Operator to have the Employee board their train and conduct a radio check once back in the lead car. [Radio]
22:29:35 hrs.	Train ID 109 reported good track inspection. [Radio]
22:29:56 hrs.	Train ID 114 Train Operator reported the Employee was on board their train and clear to proceed. [Radio]
22:30:04 hrs.	The ROCC instructed Train ID 114 Train Operator to key up and perform a track inspection from the current location to Takoma Station and have Employee contact Central. [Radio]
22:30:35 hrs.	The ROCC instructed Train ID 109 to conduct a track inspection from Takoma to Fort Totten Stations, Track #2. [Radio]
22:31:00 hrs.	Train ID 114 continues route on Track #1. [CCTV]

Interview Findings

Based on the investigation launched into the Ft. Totten Station Improper RWP event, SAFE conducted two interviews via phone, which included the investigation team and relevant Metro management. These interviews identified the following key findings associated with this event, as follows:

IRPG Employee stated they called the RWIC via phone to ask where the work location was. However, the interview of the RWIC revealed the IRPG Employee did not call the RWIC; they called another IRPG Employee. The IRPG Employee then stated, they did not utilize a radio to contact the RWIC per procedures and occasionally calls the RWIC via phone. The appropriate procedure to enter a work location and the roadway is to utilize a WMATA authorized radio. The IRPG stated they were unaware of Fort Totten Station being a transfer station. This demonstrates poor planning and training, which contributed to the IRPG Employee accessing the incorrect track and walking alongside the roadway in an attempt to locate the worksite. Prior planning may have prevented this action from occurring. Furthermore, the IRPG Employee utilized a cell phone while

on the roadway in an attempt to contact the RWIC for directions after they realized they were located on the "B" Line. Furthermore, the IRPG Employee stated they were certified to the RWP-4 Level and should have known how to access the roadway. In addition, the IRPG Employee should have known using the cell phone while on the roadway was in violation of Cardinal Safety Rule 4.227.d (Prohibited electronic devices).

Immediate Mitigation to Prevent Recurrence

- The IRPG Employee was removed from service for post-incident toxicology testing.
- The PLNT Supervisor performed a Safety Stand down and placed emphasis on MSRPH procedures.

Findings

- The IRPG Employee did not conduct a radio check prior to entering the roadway. This is not in compliance with (MSRPH) RWP General Rule 5.7 *"A verbal radio test must be done to verify the radio receives and transmits clearly."*
- The IRPG Employee used a cell phone while on the roadway. This is not in compliance with MSRPH Cardinal Safety Rule 4.227.d "*It is prohibited to use a cell phone while engaged in other maintenance activities in the field that require your full attention to maintain safety (inspecting track, using power equipment, etc.). If job related cellular communication are required, stop work activities and make or receive the call from a place of safety. "*
- The IRPG Employee entered the roadway without full clarification of instructions given for the work location. This is not in compliance with General Rule 1.8, *"If any doubt exists regarding the exact meaning of any rule, regulation, special order, procedure, written or verbal instruction or radio transmission, employees shall immediately secure additional information or clarification from their supervisor."*
- The IRPG Employee crossed over Track #1 and continued to walk along the fence line in the direction of Takoma Station. This is not in compliance with MSRPH Safety Rule 4.168 "*Employees shall not enter upon the roadway or cross the tracks except absolutely necessary in the performance of their duties and permission has been granted by ROCC. Employees and contractors shall be trained and qualified in roadway safety prior to entering WMATA's roadway."*
- The IRPG employee received instructions from an employee and not the RWIC on duty on how to excess the work location.

Weather

At the time of the incident, the temperature was 77° F with passing clouds and 80% humidity. SAFE has concluded that weather was not a contributing factor in this incident (Weather source: NOAA – Location: Washington, DC.)

Human Factors

Fatigue

Based on SAFE's interview question related to Fatigue Factors and review of the IRPG Employee's 30-day work history, it was determined, the Employee's 30-day work schedule leading up to the incident was compliant with WMATA's Policy/Instruction 10.7/1 Hours of Service Limitations for Prevention of Fatigue and did not present a significant risk of impairment due to fatigue. Based on employee interviews, there were no personal factors present that would have

increased the likelihood of fatigue-related impairment. The employees had no history of sleep issues to report.

Post-Incident Toxicology Testing

After reviewing the IRPG Employee's post-incident testing results, it was determined that the IRPG Employee involved was not in violation of the Drug and Alcohol Policy and Testing Program 7.7. 3/5, therefore, being under the influence of a controlled substance has been excluded as a contributing factor.

Probable Cause Statement

The probable cause of the RWP violation was the IRPG Employee did not verify the work location through a review of the planned RSA for Fort Totten provided by management before entering the incorrect track location. Several communications breakdowns, non-adherence to written procedures and processes within the MSRPH were identified as contributing factors in this event. Additionally, the IRPG Employee did not communicate with the RWIC before entering the roadway. Furthermore, the IRPG Employee, as a qualified Level 4 Roadway Worker, failed to identify the location of the work area, was not familiar with the work location being a transfer station with two levels, and did not take the necessary actions to properly access the roadway.

Recommendations

The following are the recommendations and corrective actions identified as a result of this investigation. These recommendations and corrective actions are tracked using WMATA's Safety Measurement System Incidents/Accidents (SMS I/A) Module and are verified by SAFE upon completion. The responsible department is identified in the corrective action code. Refer to the SMS I/A module for additional information.

Corrective Action Code	Description
88534_SAFECAPS_ IRPG_001	The IRPG Employee should receive RWP refresher training with an emphasis on radio communications.
88534_SAFECAPS_ IRPG_002	IRPG should develop a Lessons Learned with an emphasis on accessing the roadway at transfer stations.

Appendix A - Interviews

Interview Details

IRPG Employee

WMATA employee with nine years of service as an IRPG Construction Inspector.

Based on the SAFE interview, the IRPG Employee stated the following:

After picking up a Metro vehicle from the office, they went to Fort Totten Station to meet their colleagues at the work location. The scope of work was to install New standpipes for the fire suppression system on Track #1 between Georgia Avenue – Petworth) and Fort Totten.

Upon arriving at Fort Totten Station, the IRPG Employee called the Roadway Worker In Charge (RWIC) via phone to ask where they were located. The IRPG Employee then stated, they did not utilize a radio to contact the RWIC per procedures and occasionally calls the RWIC via phone. Upon contact, the IRPG Employee stated the RWIC informed them the work crew was on the left-hand side. The IRPG Employee stated they were unaware of Fort Totten being a transfer station. After the conversation with the RWIC, IRPG Employee went upstairs to Track #1. When the IRPG Employee reached the end gate and did not see the work crew, they continued to proceed approximately 200 feet in the direction of Takoma Station.

While looking for the work crew, the IRPG Employee stated, they walked down the gravel between Track #1 and Track #2. During that time, a train on Track #1 was approaching and they gave the Train Operator the proceed signal while in a place of safety. The IRPG Employee stated, once they saw a CM locating them on the "B" Line, they called the Roadway Worker In Charge to ask where the work crew was located. The Roadway Worker In Charge informed him that they were downstairs on the "E" line. The IRPG Employee was subsequently removed from service and taken for post-incident toxicology testing.

RWIC

WMATA employee with 16 years of service as a General Equipment Mechanic.

Based on SAFE interview, the RWIC stated the following:

An RJSB was performed prior to work commencing at 18:00 hrs., on August 22, 2020. At the time of the incident, the RWIC was reportedly in the cab of Prime Mover #578 speaking with the pilot. When the IRPG Construction Inspector attempted to gain access to the work location, the RWIC reported they did not give the IRPG Construction Inspector directions; another employee provided instructions. When asked what the protocol was for giving authorization access to a work location, the RWIC stated, "the employee requests permission from the ROCC via radio to go direct with them." After the employee failed to show up, the RWIC stated they contacted the employee and instructed them to go back to the kiosk at Fort Totten; however, the employee was already being removed from service. At the time of this incident, the RWIC reported they were not distracted and added the employee did not receive clear instructions that may have contributed to the incident. The RWIC stated that there was a language barrier issue from the employee giving the directions, which might have contributed to instructions not being clear.