



WMSC Commissioner Brief: W-0243 Serious Injury – Potomac Yard Station – April 17, 2023

Prepared for Washington Metrorail Safety Commission meeting on October 24, 2023

Safety event summary:

A Metrorail contractor installing a sign at the yet-to-open Potomac Yard Station fell from a ladder and broke their arm on April 17, 2023.

The worker who was injured was working with two other Gelberg Signs employees to hang a sign. Two of the workers were on separate 8-foot A-frame ladders, and a third was handing them the sign to hang on the building. With three assigned workers, there were not enough personnel to have someone on the ground stabilize each ladder while in use as required by Metrorail policy. The ladders were placed on the uneven gravel next to the building, an additional hazard.

As a worker on one of the ladders was taking the sign, they lost their balance and fell to the ground. Initially, the workers on site believed the injuries were minor but required transport to a hospital. Subsequent evaluation at the hospital determined the worker had broken their right arm. Metrorail updated the report to the WMSC accordingly to reflect that the injury now met the criteria for a serious injury under the WMSC Program Standard and federal regulation.

Probable Cause:

The probable cause of this event was Metrorail's insufficient supervisory oversight of contractors to ensure work is performed in a safe manner.

WMSC staff observations:

Metrorail completed the work on Potomac Yard Station necessary to safely open the station to passengers in May 2023.

Although this specific construction site is no longer active, there are multiple instances across the WMATA Rail System where ladders may be used for work. It is important that Metrorail ensure that these ladders or other work where there is a fall risk is conducted safely and in accordance with Metrorail and contractor safety policies and procedures. During this work, the personnel were also working close to moving construction vehicles. Metrorail should consider coordinating such rubber-tire vehicle movement around workers.



Washington Metropolitan Area Transit Authority
Department of Safety (SAFE)
Office of Safety Investigations (OSI)

FINAL REPORT OF INVESTIGATION A&I E23264

Date of Event:	04/17/2023
Type of Event:	Serious Injury
Incident Time:	11:15 hours
Location:	Potomac Yard Station, Building 2490
Time and How received by SAFE:	12:35 hours via MAC
WMSC Notification Time:	13:02 hours
Responding Safety Officers:	None
Rail Vehicle:	None
Injuries:	Non-displacement fracture
Damage:	None
Emergency Responders:	None
SMS I/A Incident Number:	None

Potomac Yard Station – Serious Injury

April 17, 2023

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Abbreviations and Acronyms

CFR	Code of Federal Regulations
I/A	Incident / Accidents
JHA	Job Hazard Analysis
MAC	Mission Assurance Coordinator
MSRPH	Metrorail Safety Rules and Procedures Handbook
NOAA	National Oceanic and Atmospheric Administration
OSI	Office of Safety Investigations
PYC	Potomac Yard Constructors
SAFE	Department of Safety
SMS	Safety Measurement System
SRC	Safety Risk Coordinator
WMATA	Washington Metropolitan Area Transit Authority
WMSC	Washington Metrorail Safety Commission

**Washington Metropolitan Area Transit Authority
Department of Safety – Office of Safety Investigations**

Executive Summary

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

On Monday, April 17, 2023, at 11:00 hours, a Gelberg Signs employee, performing contracted work, sustained injuries while installing address signage on Building 2490 at the Potomac Yard Station construction site. It was reported that the injured employee was part of the three-person work crew that was tasked with lifting and installing signage onto the side of the 2490 building. The work was performed using two eight-foot A-frame ladders with a third employee lifting the sign and passing it up to two other employees on the ladders, who would hang the sign. As the injured employee was taking the sign from the employee on the ground, they fell from the ladder and sustained injuries. The ground was uneven and there were no employees holding the ladders for additional stability.

The Potomac Yard Constructors (PYC) Safety Officer initially reported the incident to the Mission Assurance Coordinator (MAC) at 12:35 hours. The injured employee was transported to Patient First in Silver Spring, MD by the Gelberg Signs Foreman with reported minor injuries. The Washington Metrorail Safety Commission (WMSC) was notified of the event upgrade due to the seriousness of the injury at 13:02 hours on April 17, 2023.

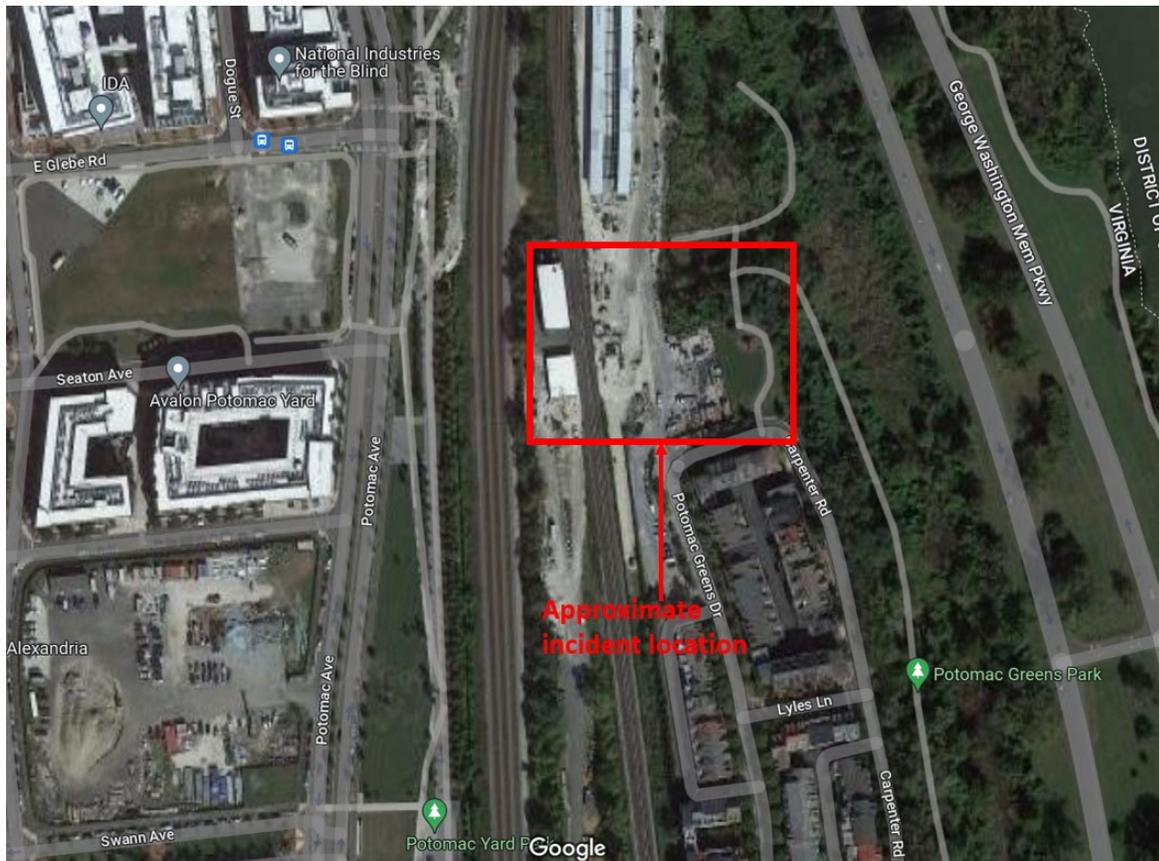
On April 18, 2023, the Office of Safety Investigations (OSI) received additional information stating the injured employee was diagnosed with a non-displacement fracture of the right arm. This event was then upgraded to a Serious Injury event. The WMSC was notified of the incident upgrade at 09:12 hours on April 18, 2023.

The probable cause of the serious injury was a failure to follow the approved Job Hazard Analysis. The Gelberg Signs Foreman did not ensure the contractors installing the signage at Potomac Yard were adhering to the approved job hazard analysis (JHA) for the work assignment. Contributing Factors to the incident were uneven ground and a failure to add stability as a mitigation measure.

Incident Site

Potomac Yard Station, Building 2490. This is a newly opened station within the Potomac Yard community. The injury occurred outside of the station at Building 2490. This was a construction site with construction vehicle movement and dirt roads.

Field Sketch/Schematics



The above depiction is not to scale.

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:

- Site assessment through documentation
- Formal Interview – SAFE interviewed one individual as part of this investigation. Interviews include persons present at, during, and after the incident, those directly involved in the response process. SAFE interviewed the following personnel:
 - Gelberg Signs Employee
- Informal Interviews – Collected through conversations with individuals during the investigation to provide background and supporting information. Written statements were reviewed from personnel present during the event.

- Documentation Review – A collection of relevant work history information and process documentation contained in Metro systems of record. These records include:
 - Metrorail Safety Rules and Procedures Handbook (MSRPH)
 - National Oceanic and Atmospheric Administration (NOAA)
 - Gelberg Signs Employees' Incident Statements
 - Gelberg Signs Job Hazard Analysis (JHA)

Investigation

On Monday, April 17, 2023, at 11:00 hours, three Gelberg Signs employees were installing address signage on Building 2490 at the Potomac Yard construction site. The employees utilized two 8-foot "A" Frame ladders for this process. Two of the employees (Employees 1 and 2) were positioned on the ladders while the signage was being installed. The third employee (Employee 3) was on the ground passing the signage up to the other employees. The Gelberg Signs Foreman was on site but not near the incident location observing the employee's work. According to the witness statement, as Employee 1 (the injured employee) was climbing the ladder, Employee 2 was on the opposite ladder. Employee 3 was on the ground and passing the signage upwards to the employees on the ladders. As Employee 1 was attempting to receive the sign from Employee 3, Employee 1 lost their balance, fell off the ladder, and sustained injuries to their right arm and right leg. Employee 2 proceeded to aid Employee 1. Employee 3 went to contact the Gelberg Signs Foreman. The Gelberg Signs Foreman conducted a preliminary investigation and obtained witness statements and photographs at the incident site. The Foreman reported the incident to the PYC Safety Officer and transported Employee 1 to Patient First.

The next morning, April 18, 2023, OSI received additional information stating employee was diagnosed with a non-displacement fracture of the right arm. The incident was upgraded to a serious injury incident. The WMSC was notified of the incident upgrade at 09:12 hours on April 18, 2023.

Chronological Event Timeline

A review of supporting documentation revealed the following timeline:

Date	Time	Description
04/17/2023	11:00 hours	Gelberg Signs employees were installing address signage for Building 2490 at the Potomac Yard Station. [Witness Statement]
04/17/2023	11:15 hours	Gelberg Signs employee fell off the 8-foot ladder while installing address signage. [Witness Statement]
04/17/2023	11:15 – 12:35 hours	Gelberg Signs Foreman was notified of the incident. Gelberg Signs Foreman reported the incident to PYC. [Witness Statement]
04/17/2023	12:35 hours	PYC Safety Officer contacted the MAC and reported a contractor from Gelberg Signs had fallen off an 8-foot ladder. PYC reported the injured employee was transported to Patient First in Silver Spring, MD for soreness to the right arm and right leg. [MAC Notification]
04/18/2023	09:12 hours	WMSC was notified by telephone of additional information following the contractor's medical treatment that indicated they were diagnosed with a non-displacement fracture of the right arm. OSI reclassified this incident as a Serious Injury due to a fractured bone. [MAC Notification]

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

Interview Findings

As part of the investigation launched into the event, SAFE interviewed one employee. The interview identified the following key findings associated with this event. The findings detailed below include reported information from involved personnel and may conflict with other data sources contained in the report. The interview was conducted in Spanish by an OSI Investigator and findings are translated and summarized below:

Gelberg Injured Employee

- The injured employee reported they were working on ladder that was not being supported as they were installing signage.
- The employee stated there should have been an additional employee.
- The employee reported they were not aware of the foreman's location. The foreman was not present when the incident occurred.

Weather

On April 17, 2023, at the time of the incident, NOAA recorded the temperature as 64°F, winds at 10 MPH, scattered clouds, and 34% humidity. This event occurred on the exterior of a building within a construction site. The weather was not a contributing factor in this incident (Weather source: NOAA – Location: Alexandria, VA)

Related Rules and Procedures

- 29 CFR 1926.1053(b) Ladders
- Gelberg Signs Job Hazard Analysis (JHA)

Human Factors

Evidence of Fatigue

The biomathematical fatigue modeling application (SAFTE-FAST Web SFC) was not applied for this event.

Fatigue Risk

The biomathematical fatigue modeling application (SAFTE-FAST Web SFC) was not applied for this event.

Post-Incident Toxicology Testing

Post-Incident Toxicology Testing was not conducted for this event.

Findings

- Gelberg Signs employees were installing address signage under tasking of Potomac Yard Contractors group.
- Two 8-foot A-frame ladders were used for the installation.
- The ground beneath the ladders was dirt with stones and generally uneven.
- There were only three employees present for the installation.
- The employee's injuries were initially reported as minor but upgraded after they received treatment off the work site.

Immediate Mitigation to Prevent Recurrence

- Gelberg Signs Foreman stopped work and conducted a safety briefing.

Probable Cause Statement

The probable cause of the serious injury was a failure to follow the approved Job Hazard Analysis. The Gelberg Signs Foreman did not ensure the contractors installing the signage at Potomac Yard were adhering to the approved job hazard analysis (JHA) for the work assignment. Contributing Factors to the incident were uneven ground and a failure to add stability as a mitigation measure.

Recommended Corrective Actions

There are no Recommended Corrective Actions regarding this incident as the project and work task are complete. As noted above, the contractor company held a safety briefing with their personnel following the event.

Appendices

Appendix A – Interview Summary

The below narrative summarizes 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.

During the interview, the employee reported their work task was hanging a WMATA sign at 2490 Potomac Greens Service Drive, Alexandria, VA at the Potomac Yard Station. During the installation, they stated that two 8-foot ladders were used. There were two additional employees within the work crew. The employee stated one employee was on the other ladder and the last employee was assisting from the ground. The employee reported they think there should have been two helpers to support both ladders during the work. They stated they were unaware if the employee on the ground was supporting their ladder before they fell because they were focused on the signage. The employee reported the foreman was not at the accident site when they fell off the ladder. The foreman arrived shortly after the incident to assist. The employee stated they were transported to the clinic by the foreman.

Appendix B – Gelberg Signs Employee Witness Statements



Witness Statement for Incident/Accident Report

Name of Employee claiming incident: [REDACTED]

Date of Incident: 04/17/23

Location of Incident: POTOMAC YARD (WHISTA)

Time of Incident: 1115 - 1130

Witness to Incident: [REDACTED]

Statement Details of Incident:

WE WERE INSTALLING A SIGN (LIST#01) ON THE EAST WALL OF THE BUILDING (DC SWITCH) WHICH SHOULD BE PLACED AT THE 6'10". FOR THIS ACTIVITY WE USED TWO LADDERS 8', [REDACTED] WAS ON ONE LADDER AND I WAS ON THE OTHER. [REDACTED] HELPED US TO CLIMB THE SIGN. [REDACTED] THEN PLACED A SCREW TO SECURE IT, WHILE I HELD THE OTHER SIDE SO IT WOULDN'T GET OUT OF BALANCE. IN MOMENTS I HEARD A SCREECH SCREEN AND OBSERVED [REDACTED] ON THE GROUND, [REDACTED] HAD FALLEN FROM THE LADDER. I IMMEDIATELY WENT TO HELP [REDACTED] AND [REDACTED] CALLED [REDACTED]

Additional Information:

In your opinion, was this problem/ incident in violation of a company policy? Yes / No

If yes, specify which policy and how the incident violated it.

[REDACTED] DID NOT HOLD THE LADDER THAT [REDACTED] WAS ON

What ideas do you have for remedying the situation?

- RISK ANALYSIS
- AVOID UNNECESSARY DANGERS
- PAY ATTENTION TO PERSONAL SAFETY AND THAT COWORKERS

Is there any other information you feel is relevant to this situation?

Name of Person Preparing Report: [REDACTED]

Signature of Person Preparing Report: [REDACTED]

Date: 04/18/23

Employee Name: [REDACTED]

Employee Signature: [REDACTED]

Date: 04/18/23

Document 2 – Employee 2’s Witness Statement page 2 of 2.



Witness Statement for Incident/Accident Report

Name of Employee claiming incident: _____

Date of Incident: 04-17-2023

Location of Incident: Potomac Yard

Time of Incident: 11:30

Witness to Incident: _____

Statement Details of Incident:

We had to set up the A ladder to the side because there were trucks passing by us back and forth. [redacted] and [redacted] were on two separate ladders and when I was passing the sign up to the both of them I had to step on the two first steps and with my right hand I had to hold onto the ladder [redacted] was on so I could have a better grip lifting the sign up. when [redacted] was done screwing the first screw in that's when I passed the sign up to the both of them then [redacted] tried taking another step up the ladder to try to screw the second hole in and that's when [redacted] lost balance and fell off but the ladder never fell with [redacted]

Additional Information:

In your opinion, was this problem / incident in violation of a company policy? Yes/No No

If yes, specify which policy and how the incident violated it.

What ideas do you have for remedying the situation?

I think whenever we have projects we all as a team need to plan things out.

Is there any other information you feel is relevant to this situation?

Name of Person Preparing Report:

[Redacted]

Signature of Person Preparing Report:

[Redacted]

Date:

Employee Name:

[Redacted]

Employee Signature:

[Redacted]

Date:

04-23-23

Appendix C – Gelberg Signs Supervisor Report of Injury

Employee and Supervisor Report of Injury or Illness **BBSI**

Injured Employee Name: _____ SSN (Last 4): _____
 Client Company: Gelberg Signs

EMPLOYEE REPORT OF INJURY (this section is completed by the employee reporting an injury/illness)

Employee Address: _____ Phone: _____
 Email Address: _____ Job Position: _____
 Normal Work Hours: _____ a.m. _____ p.m. to _____ a.m. _____ p.m. Days Off: M T W Th F Sa Su
 Date and Time of Injury: _____ a.m. _____ p.m. Time employee began work: _____ a.m. _____ p.m.
 Date and Time First Reported: _____ a.m. _____ p.m. Injury reported to: _____
 Worksite location where injury occurred (include address): _____
 Describe how the injury/illness happened and the body part(s) affected: _____

 When did you first seek medical attention? Date and Time: _____ a.m. _____ p.m.
 Name and address of medical provider: _____
 Have you treated for this type of injury in the past? Yes No If yes, when? Date: _____
 If yes, where did you treat? (Name, address, phone): _____
 What are you doing to prevent similar injuries or additional injuries/illness? _____

 Employee Signature: _____ Date: _____

SUPERVISOR INVESTIGATION OF INJURY (if supervisor was not present, they must interview witnesses)

Supervisor Name: _____ Department: Install
 Date and Time of Injury: 4/17/23 11 a.m. p.m. Date and Time Reported: 4/17/23 3 a.m. p.m.
 Reported to Whom: _____ Did you see the incident happen? Yes No
 How did the injury occur? was climbing a ladder and fell off to the ground.
 Describe injury and body part affected: Injured right side (shoulder, elbow, hand, leg, knee)
 Where was medical care provided?: Patient First Urgent Care Date and Time: 4/17/23 1 a.m. p.m.
 Did the employee continue to work after the injury? Yes No If no, why? Light Duty Restrictions
 Do you question the validity? Yes No If yes, why? _____
 List known prior injuries the employee has had: _____
 Specify if it was an unsafe condition (i.e. equipment malfunction, co-worker, employee or other contractor), describe how it has been corrected: Co-worker stopped holding base of ladder for support
 If it was an unsafe act by the employee or by a co-workers, what corrective action has been taken (i.e. write up for not wearing safety glasses)? _____
 What are you doing to eliminate this type of accident in the future? Will re-iterate importance of stabilizing ladder when it is in use
 Additional Comments: _____

 Supervisor Signature: _____ Date: 4-18-23

WC1 Employee and Supervisor Report 01012019

Document 5 – Gilbert Signs Employee and Supervisor Report of Injury.

Incident Date: 04/17/2023 Time: 11:15 hours
 Final Report – Serious Injury
 E23264

Drafted By: SAFE 702 – 06/22/2023
 Reviewed By: SAFE 71 – 06/23/2023
 Approved By: SAFE 71 – 06/23/2023

Appendix D – Incident Site Photographs

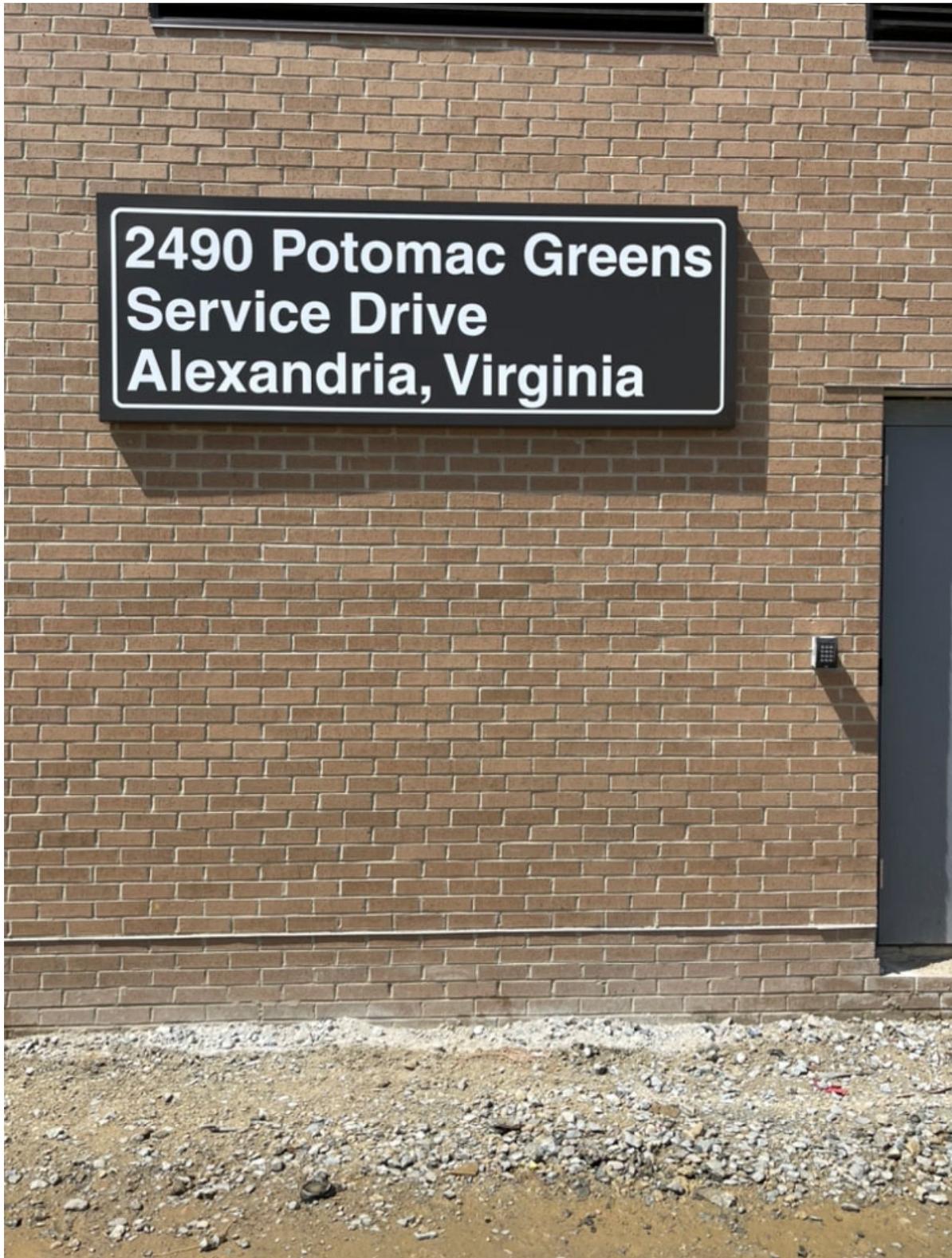


Image 1 – Front view of the installed signage at the incident site.



Image 2 – View of the Gelberg Signs Employee’s work location setup within the construction zone at the Potomac Yard Station. Note cords and uneven ground beneath the ladders’ footing.



Image 3 – Entrance view of the Gelberg Signs Employee’s work location setup within the construction zone at the Potomac Yard Station.



Image 4 – Frontal view of the Gelberg Signs Employee’s work location setup within the construction zone at the Potomac Yard Station.

Appendix E – Job Hazard Analysis

Job Hazard Analysis (JHA)

Activity/Work Task:	Overall Risk Assessment Code (RAC) (Use highest code)					M
Project: Potomac Yards Station	Risk Assessment Code (RAC) Matrix					
Contractor: Gelberg Signs	Severity	Probability				
Date Prepared: 9/15/22		Frequent	Likely	Occasional	Seldom	Unlikely
Prepared by (Name/Title): [REDACTED]	Catastrophic	E	E	H	H	M
	Critical	E	H	H	M	L
Reviewed by (Name/Title):	Marginal	H	M	M	L	L
	Negligible	M	L	L	L	L
Notes:	Review each "Hazard" with identified safety "Controls" and determine RAC (See above) "Probability" is the likelihood to cause an incident, near miss, or accident and identified as: Frequent, Likely, Occasional, Seldom or Unlikely. "Severity" is the outcome/degree if an incident, near miss, or accident did occur and identified as: Catastrophic, Critical, Marginal, or Negligible Step 2: Identify the RAC (Probability/Severity) as E, H, M, or L for each "Hazard" on AHA. Annotate the overall highest RAC at the top of AHA.					RAC Chart E = Extremely High H = High Risk M = Moderate Risk L = Low Risk
Jobsite required PPE to include: - Hard hat - Safety glasses - Class 2 high visibility vest - Steel toed/composite toed work boots - Level 4 gloves at all times when on the job site - Use Dust Mask and Shield when drilling in concrete when vacuum dust extraction system is not utilized and when mixing concrete or grout						

Reviewed by
PJC safety

Job Steps	Hazards	Controls	RAC
1. Mobilization: Deliver, Unload tools. Transport tools & Equipment.	Struck by / damage to building & equipment Muscle Strains, Trips & falls; Caught between/Pinch Points	Look out for Moving equipment. Use Proper lifting technique: Follow maximum lifting 50lbs per person rule. Keep area clear of trip hazards. Conduct toolbox talks and stretch and flex before working/lifting. Proper PPE required when handling material (gloves, hard hat, safety glasses, steel toed boots)	
2. Selection and Inspection of Tools. Layout and Stage Signage.	Electrical Shock, Abrasions, chemical irritation, splinters; Muscle Strains, Trips & falls; Caught between/Pinch Points	Proper tool for the job to be selected. Use only be for the purpose for which they were made. All tools will be inspected prior to use. Defective and/or modified tools will not be used.	

This AHA has been reviewed for general compliance with the jobsite safety requirements. The organization performing this activity is responsible for reviewing this AHA with all personnel involved with the Definable Feature of Work (DFOW) on a regular basis and must notify the General Contractor and adjust the AHA as necessary whenever the plan for performing the DFOW is modified or following an unplanned event.

Document 6 – Gilbert Signs JHA for the Potomac Yard Station page 1 of 4.

		Plan for proper storage/designated area(s) for storing material and tools.	
3. Signage Installation Pylons, Directional, Anchored, Elevated.	Abrasions, chemical irritation, cuts/lacerations, scrapes, splinters; Muscle Strains, Trips & falls; Caught between/Pinch Points	Stretch as necessary, and avoid repetitive motions/bad ergonomics. Be mindful of other trades	
		Appropriate PPE must be worn based on condition and the hazards. 100% tie off above 6'. Tie off to structure.	
		Use sharpened drill bits/unbroken drill bits when drilling holes for screw anchors.	
		Use caution when installing and tightening screws – be mindful of hand placement.	
		When using ladder, make sure ladder is fully engaged and is set on stable, level ground with no debris or obstructions.	
		Inspect ladder prior to each use, and remove defective ladders not meeting safety standards from service.	
		Follow belt buckle rule, and do not stand above the safety step	
		Drink plenty of fluids. Take breaks in shaded areas, if needed, and work in teams to keep watch of one another.	
4. Clean-up	Abrasions, chemical irritation, cuts/lacerations, scrapes, splinters; Muscle Strains, Trips & falls; Caught between/Pinch Points; Dropping tools or equipment.	Wear gloves when picking up and carrying debris. Dispose of all trash in dumpsters. Proper PPE employed.	
		Be sure to not leave miscellaneous scraps in work area. Keep area clear of trip hazards.	

This AHA has been reviewed for general compliance with the jobsite safety requirements. The organization performing this activity is responsible for reviewing this AHA with all personnel involved with the Definite Feature of Work (DFOV) on a regular basis and must notify the General Contractor and adjust the AHA as necessary whenever the plan for performing the DFOV is modified or following an unplanned event.

Document 7 – Gilbert Signs JHA for the Potomac Yard Station page 2 of 4.

Equipment to be Used	Training	Inspection Requirements
Material handling equipment		Prior to Use
Duct Jack, Winch, Manlift,		Daily

Activities Requiring a Competent or Qualified Person – Attach Proof of Competency		
Activity	Designated Competent or Qualified Person	
Signatures / Verification of Review – Aerial Lifts		
Name (Print)	Signature	Date

This AHA has been reviewed for general compliance with the jobsite safety requirements. The organization performing this activity is responsible for reviewing this AHA with all personnel involved with the Definable Feature of Work (DFOW) on a regular basis and must notify the General Contractor and adjust the AHA as necessary whenever the plan for performing the DFOW is modified or following an unplanned event.

Document 8 – Gilbert Signs JHA for the Potomac Yard Station page 3 of 4.

This AHA has been reviewed for general compliance with the jobsite safety requirements. The organization performing this activity is responsible for reviewing this AHA with all personnel involved with the Definable Feature of Work (DFOW) on a regular basis and must notify the General Contractor and adjust the AHA as necessary whenever the plan for performing the DFOW is modified or following an unplanned event.

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Document 9 – Gilbert Signs JHA for the Potomac Yard Station page 4 of 4.

Appendix F – Root Cause Analysis

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