FINAL REPORT OF INVESTIGATION A&I E18438

October 10, 2018

Columbia Heights Fatality

Adopted by the Washington Metrorail Safety Commission at its meeting on October 8, 2019.

Washington Metrorail Safety Commission
777 North Capitol Street, NE, Suite 402
Washington, DC 20002

FINAL REPORT OF INVESTIGATION A&I E18438

SMS 20181011#74893

Date of Event:	10/10/2018
Type of Event:	Customer Fatality
Incident Time:	13:30 hrs.
Location:	Columbia Heights (E04)
Time and How received by SAFE:	13:35 hrs., SAFE on Call Phone
Safety Officer Response:	Yes
Time of Safety Officer Arrival:	14:05 hrs.
Time of Safety Officer Departure:	15:15 hrs.
Rail Vehicle:	N/A
Injuries:	Fatal Injury
Damage:	N/A
Emergency Responders:	DC EMS, SAFE, MTPD

Executive Summary

On October 10, 2018 at approximately 13:30 hrs., an adult male Customer in a motorized wheelchair was injured after attempting to exit the Columbia Heights Station (E04) via ascending escalator (X01), rather than using the station's elevator. Upon reaching the top of the escalator, the Customer and wheelchair fell backward and tumbled to the bottom. Several bystanders and the station manager immediately rendered aid until medics arrived. The Customer was transported to a local hospital where he was pronounced deceased.

Based on review of the Verint video recording playback of the E04 mezzanine, it revealed the following information related to the wheelchair customer:

- Wheelchair customer alighted from a Greenbelt bound train and made his way to the platform elevator at E04
- Wheelchair customer was traveling alone
- Wheelchair customer was positioned at the elevator (E04) located on the station's West entrance and depressed the call button. Approximately 15 seconds later, the customer turned and drove onto the ascending escalator (X01) before the elevator arrived.
- Once the wheelchair customer made it to the top of the escalator, the customer and wheelchair fell backward, landing at the bottom of the escalator, the escalator

then dragged the customer up from the bottom a short distance, until an unidentified customer depressed the Emergency Stop Button.

Considering all the salient facts and based on the mezzanine video review, SAFE has concluded that the incident occurred as a result of the customer's impatient behavior by making decision to utilize his motorized wheelchair to access station escalator instead of safely boarding closest station elevator. The station elevator, located on the station's mezzanine and services the street level, was in service at the time of the incident. Subsequent review of camera footage revealed that the injured customer initially called for the elevator but waited only 15 seconds before diverting to the ascending escalator.

An inspection was performed by Elevator/Escalator Technicians (ELES) and Department of Consumer and Regulatory Affairs (DCRA) and no anomalies were found.

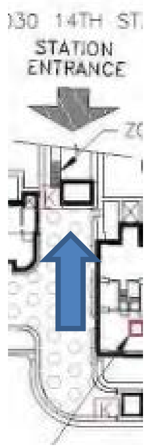
Notification

Title	Time	Comment:
FTA	16:09 hrs.	Email
TOC	16:09 hrs.	Email
CMC	15:09 hrs.	Phone Call

Incident Site

Columbia Heights (E04), Escalator X01

Field Sketch/Schematics



Investigation

On October 10, 2018 at approximately 13:30 hrs., an adult male Customer in a motorized wheelchair was injured after attempting to exit Columbia Heights Station (E04) via an ascending escalator. A review of video footage depicts that the individual involved was originally positioned at the elevator (E04) located on the station's West entrance and depressed the call button. Approximately 15 seconds later, the customer turned and drove onto the ascending escalator (X01) before the elevator arrived. Upon nearing the top of the escalator, the customer and wheelchair fell backward, landing at the bottom of the escalator. The escalator then dragged the customer up from the bottom a short distance, until an unidentified customer depressed the Emergency Stop Button. Emergency response personnel arrived, and the customer was transported to Washington Hospital Center (Med Star) where he was pronounced dead. One additional male customer reported sustaining minor injuries to his right and left ankles when the wheelchair struck him. Medical attention was offered to this customer but was denied.

SAFE and Operations personnel responded to the incident to investigate. The initial findings indicate that the incident escalator was operating properly, it was dry and free of tripping hazards and the area was well lit. Additionally, the street elevator located to the left of the bank of escalators and the platform elevator were functioning properly at the time of the incident. All necessary departments, including the Department of Consumer and Regulatory Affairs (DCRA) who has jurisdiction of Metro escalators when a fatality occurs on vertical transportation in the District, performed an investigation.

The elevator was inspected and was found to be functioning properly. It has been determined the escalator's function did not contribute to the incident, therefore excluding it as a factor (See attachment 1).

Weather

At the time of the incident, the temperature was 81 °F, and clear. SAFE has concluded that weather was not a contributing factor in this incident (Weather source: National Oceanic Atmospheric Administration (NOAA) – Location: Washington, DC.)

Findings

- The Customer utilizing a motorize wheel chair initially called for the elevator to exit the Columbia Heights Station (E04), however, after waiting approximately 15 seconds, he used the ascending escalator
- The elevator was functioning properly at the time of the incident

- It took the elevator approximately 52 seconds to arrive from the street level once it was called
- Once the customer neared the top of the escalator, the customer and the wheel chair fell backward down the escalator
- The customer was transported to Med Star Hospital by emergency personnel where he was pronounced dead from his injuries
- One other customer sustained minor injuries to his right and left ankles, however, medical assistance was not requested
- The escalator was functioning properly at the time of the incident.
- The area was well lit, dry and free from any tripping hazards
- An inspection was performed by ELES and DCRA
- No anomalies were found
- Escalator type – Kone 180 Transit grade heavy duty

Immediate Mitigation

- The escalator was taken out of service for post incident inspection

Conclusion

Based on the salient facts identified as part of this investigation, ELES Inspection Report and Verint Video Recording, SAFE concludes that:

1. The incident occurred as a result of the customer's impatient behavior by making decision to utilize his motorized wheelchair to access station escalator instead of safely boarding closest station elevator.
2. Escalators are not equipped or recommended for wheel chair accessibility.

The escalator was inspected, and no anomalies were identified or reported as a result of post incident inspection. Considering all the facts gathered from this investigation, SAFE has no further information to reveal regarding E18438 and recommends its closure.

Attachments

ELES ENGINEERING REPORT - FOR COLUMBIA HEIGHTS STATION (E04X01)

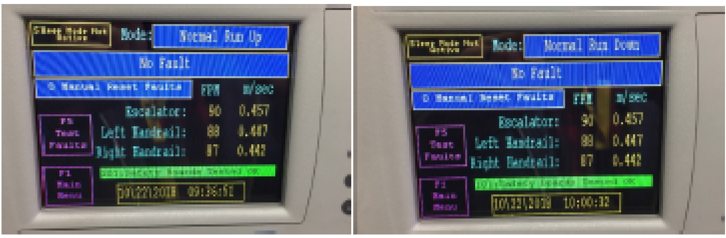
Back Ground:

Engineering was tasked to determine if there is any condition on E04X01 escalator that may contributed to the accident resulting in patron accident on October 10, 2018. An engineering inspection was conducted by [redacted] on October 22, 2018, with ELES callbacks mechanics, [redacted] [redacted] assisting. The focus of the inspection was to identify any deviations from the design specifications from the manufacturer (KONE) and the operation of the escalator.

A post-incident inspection was previously performed by a DCRA inspector on October 11, 2018 and as a result all of the steps in the unit, as well as the top left and bottom left handrail entry guard were replaced. On October 17, 2018 the unit was re-inspected and was cleared to return to service by DCRA. At the time of ELES Engineering inspection, the unit was out of service and was being used as a "walker".

Inspection Findings:

During the inspection, the top and bottom landing plates, balustrade panels, left and right handrails, and skirt brushes were checked with no defects or damage observed. All of the steps were new with no sign of damage. The escalator run in both directions (up and down). The escalator operated smoothly, with no defects or deviations from the design specification observed. The speed of the escalator, as measured by the control system, was 90 feet per minute in both directions as per the specification. The handrails were also synchronized to the escalator speed while running in both directions. (see pictures below).



A check of the stopping distance was performed in both directions (up and down), the escalator was consistantly stopping smoothly, within the distance specified by the manufacturer. The stopping distance was 10.1 inches in the up direction and 8.6 inches in the down direction. This is within the range of 5.87 - 15.84 inches specified by the manufacturer. (see pictures below).

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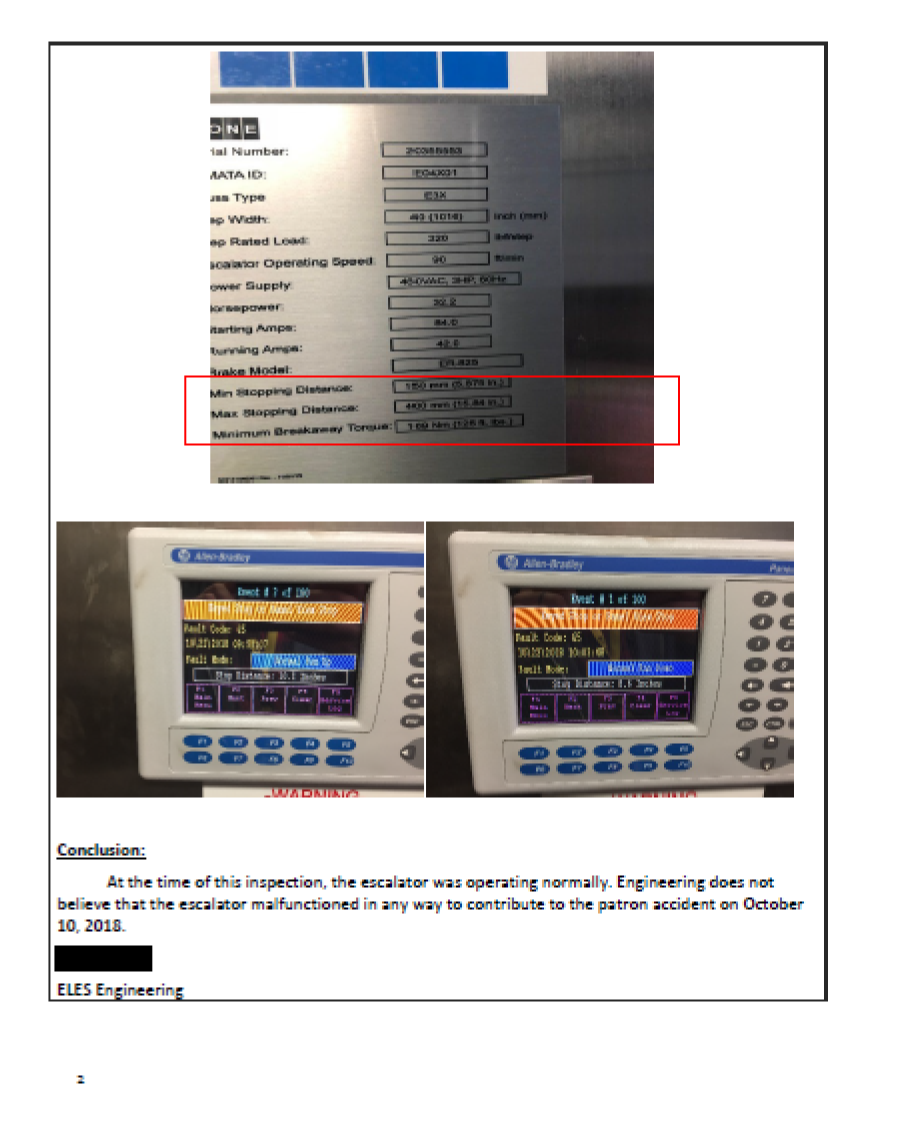
Attachment 1- E04X01 Escalator inspection



Conclusion:

At the time of this inspection, the escalator was operating normally. Engineering does not believe that the escalator malfunctioned in any way to contribute to the patron accident on October 10, 2018.

ELES Engineering

Attachment 1- E04X01 Escalator inspection

Photos

Photo 1 – Escalator X01

Photo 2 – Customer seconds after alighting from a Greenbelt bound train and making his way to the platform elevator

Photo 3 – Customer Calling Elevator

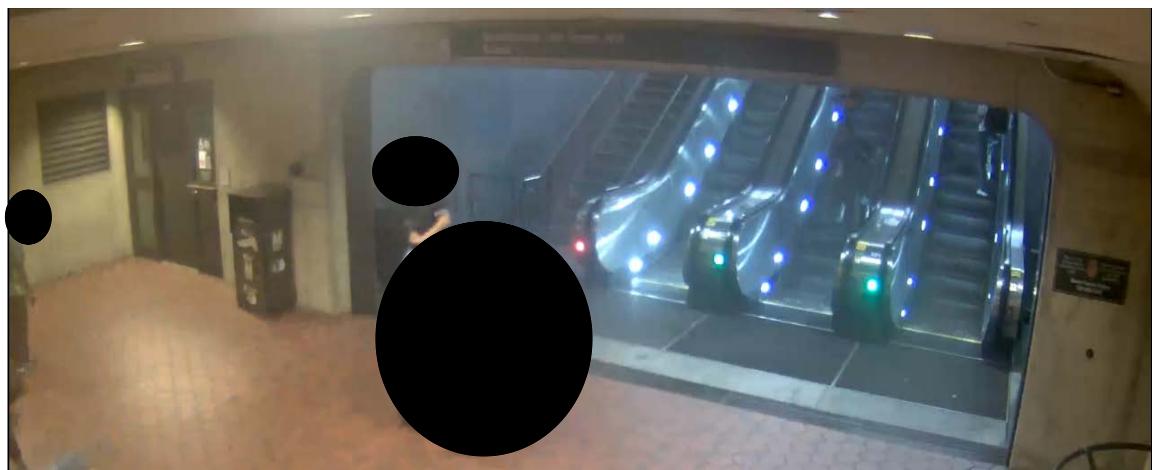


Photo 4 – Customer heading to escalator

Photo 5 – Customer going up on escalator

Photo 6 – Customer and wheelchair after falling down the escalator

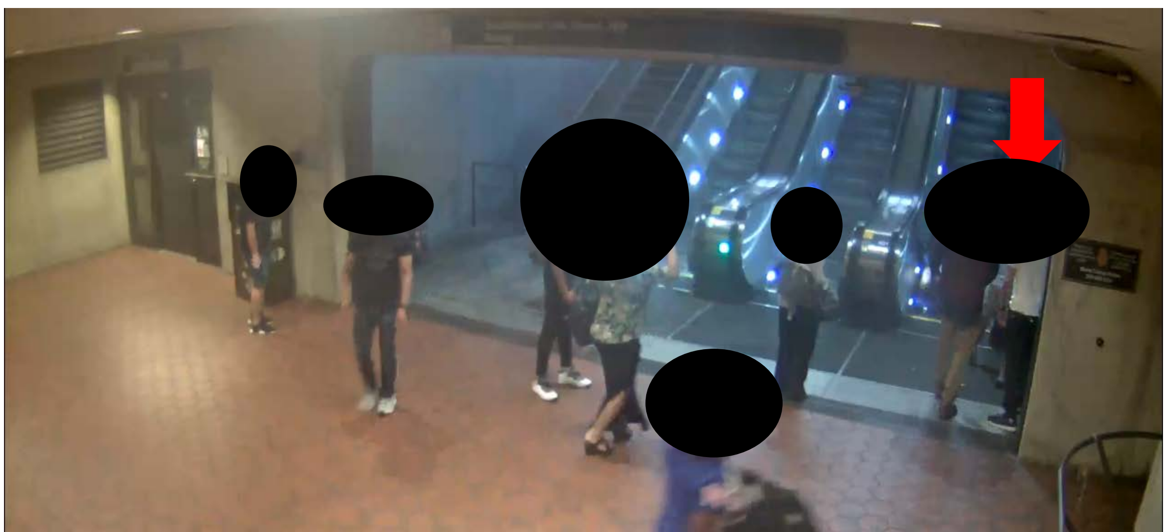


Photo 7 – Unidentified customer depressing the Emergency Stop button

Photo 8 – Station Manager arriving to assist injured customer

Photo 9 – Customer reaching the top moments before falling backwards