

## Description/Disclaimer for Board Meeting Presentation

### **WMATA Arcing/Smoke Event with Passenger Evacuation at L'Enfant Plaza Station**

Washington, D.C.

January 12, 2015

DCA15FR004

### **Board Meeting**

This animation/video presentation shows the sequence of events on the day of the accident. The accident took place on the afternoon of Monday, January 12, 2015, when electrical arcing occurred in the Washington Metropolitan Area Transit Authority (WMATA) Metrorail Yellow Line tunnel approximately 2000 feet south of L'Enfant Plaza Station, with heavy smoke in the tunnel and the station. First, a two-dimensional animation is used to provide an overview of events to provide background for the board meeting. The animation is followed by a surveillance video from inside L'Enfant Plaza Station showing the movement of trains and people as smoke builds up in the station. The animation/video includes audio with a voice-over narration.

The animation begins with an area map of part of the WMATA Metrorail system (not to scale) on the left side of the screen, depicting an overall view of the location of the L'Enfant Plaza Station and the east/west Blue, Silver and Orange Line tracks crossing the north/south Yellow and Green Line tracks passing through the station. The location of arcing in the Yellow line is indicated approximately 2000 feet south of L'Enfant Plaza station, next to a vent shaft in the vicinity of Water Street. A timeline of selected events is displayed on right side of the screen, showing the time and a description of each selected event, which appears when mentioned in the narration. The illustration of the sequence of events starts at 3:05 pm when a smoke alarm activated near the location of the electrical arcing. The motions of southbound Train 302 and southbound Train 510 are illustrated graphically. A photograph shows smoke coming from the ventilation shaft opening near Water Street. The information in the narration is highlighted in text boxes

on the screen as each event takes place, with selected events recorded in the timeline on the right side of the right side of the screen. The final event in the animation is the evacuation of all passengers from Train 302 at 4:27 pm.

The animation is followed by surveillance video from inside the L'Enfant Plaza Station looking southbound toward the tunnels for Metro's Green and Yellow Lines. The video is played ten times faster than actual speed. The video shows smoke first visible coming from the tunnel at 3:09. At approximately 3:13, Train 302 enters L'Enfant Plaza Station and stops at the platform for about 40 seconds, continuing southbound into the tunnel along the Yellow Line. Smoke can be seen coming from the southbound tunnel. Passengers on the platform evacuate the station. Southbound Train 510 stops on the platform at about 3:23 and remains stopped at the platform. At about the same time, a northbound train stops without opening the train doors and then proceeds to the next station.

### **Animation narration**

1. The accident began with an electrical arcing event associated with power supplied to the third rail of track No. 2, in the Yellow line tunnel about 2000 feet south of L'Enfant Plaza station.
2. At 3:05, a smoke alarm activated near the location of the electrical arcing.
3. At 3:06 an electrical circuit breaker tripped and remained open on a circuit feeding power from L'Enfant Plaza Station to the third rail of No.2 track. However, power was still being supplied to this third rail from an electrical feed south of the arcing area.
4. During review of surveillance video footage, smoke was first seen coming from the tunnel into the station at 3:09.

5. Southbound Train 302 stopped at 3:13 to service the L'Enfant Plaza Station, allowing passengers to exit and board the train. About 40 seconds later, the train proceeded south entering the tunnel.
6. Train 302 stopped in the tunnel at 3:15, due to a heavy accumulation of smoke that restricted the operator's visibility. The rear of the train was about 386 feet from the station.
7. Due to reports of smoke in the L'Enfant Plaza Station, the WMATA control center sent a command to activate ventilation fans in the station in emergency exhaust mode at 3:16.
8. At 3:17 the operator of Train 302 contacted the WMATA control center and reported that the train had encountered heavy smoke and was unable to continue south.
9. In response to a civilian 911 call at 3:18, reporting smoke coming from the ventilation shaft opening near Water Street, first responders were dispatched to that location at 3:22.
10. Also at 3:22, WMATA notified the DC Office of Unified Communication of smoke in the L'Enfant Plaza Station.
11. Southbound Train 510 stopped at the L'Enfant Plaza Station at 3:23. All passengers and the train operator exited the train.
12. The WMATA control center sent a command at 3:24 to activate fans in the ventilation shaft south of the station in emergency exhaust mode.
13. At 3:26 the DC Office of Unified Communication dispatched first responders to L'Enfant Plaza Station; DC first responders began arriving at the station at 3:31.

14. Third rail power to No.1 and No. 2 track was de-energized in the station at 3:40. However, power was still being supplied from the electrical feed south of the arcing area.
15. At 3:49 the WMATA control center sent a command to de-energize the third rail power supplied from south of the arcing location, finally removing all power in the area where arcing occurred.
16. Firefighters reported to incident command at 3:50 that they had arrived at the rear of Train 302. Incident command responded to proceed with an evacuation.
17. At 4:27, firefighters reported to incident command that all passengers were evacuated from Train 302 in the tunnel.

### **Video Narration**

1. This is video from a surveillance camera inside the L'Enfant Plaza station.
2. The video is played ten times faster than real time.
3. The camera is facing southbound toward the tunnels for Metro's green and yellow lines.
4. Smoke was first seen coming from the tunnel at 3:09, near the station platform.
5. Shortly thereafter, the smoke had dissipated.
6. Southbound Train 302 stopped at 3:13 to service the L'Enfant Plaza Station, allowing passengers to exit and board the train. About 40 seconds later, the train proceeded south entering the tunnel.

7. Event recorder data shows Train 302 stopped at 3:15, at this time the last car was about 386 feet from the end of the L'Enfant Plaza platform.
8. Looking at the southbound tunnel, smoke is beginning to emerge.
9. Due to reports of smoke in the L'Enfant Plaza Station, the WMATA control center sent a command to activate ventilation fans in the station in emergency exhaust mode at 3:16.
10. Heavy smoke can be seen coming from the southbound tunnel.
11. Passengers on the platform can be seen evacuating the station.
12. Southbound Train 510 stops on the platform at about 3:23, ten minutes after train 302 was at the platform.
13. At about the same time, a northbound train stops without opening the train doors and then proceeds to the next station.
14. At 3:24, the WMATA control center sent command to activate fans in the ventilation shaft south of the station in emergency exhaust mode.
15. Based upon a view from a different surveillance camera, all passengers and the operator exit from stopped Train 510.
16. The platform is now occupied by Train 510.
17. During review of surveillance video it was noted that 380 people evacuated from Train 302 through the tunnel portal

**Note: Animation is available upon request to Office Record Management Division (CIO-40)**