



# PRELIMINARY REPORT

## RAILROAD

### CSX Transportation Freight Train Derailment

**Alexandria, Virginia**  
**May 19, 2018**  
**RRD18MR007**

*The information in this report is preliminary and will be either supplemented or corrected during the course of the investigation.*

On May 19, 2018, about 7:02 a.m. eastern daylight time, southbound CSX Transportation (CSX) freight train X41518 derailed near mile post (MP) 102.9 while traveling on main track one. The derailment occurred about 500 feet north of two CSX bridges that cross over Norfolk Southern Railway (NS) tracks. A CSX bridge on main track one was extensively damaged; a CSX bridge for main tracks two and three remained in service. Some of the derailed CSX freight cars fouled the NS tracks that were below the bridge. (See figure 1.)



**Figure 1.** NTSB drone aerial photograph of damaged bridge and debris.

The train consisted of 3 locomotives and 167 mixed-freight cars (that is, 91 loaded cars and 76 empty cars). The train was 9,910 feet long with 14,394 trailing tons. None of the derailed cars were transporting hazardous material. Of the 31 derailed cars, 25 cars (in positions 42nd through the 66th) derailed at MP 102.9. An additional 6 cars (in positions 89th through 94th) derailed at MP 103.2. The train crew was uninjured. Damage is estimated to be between \$5 and \$7 million.

At the time of the accident, there were low clouds, wind was from the northeast at 9 mph, 7 miles of visibility with light rain (approximately 1/10 inch per hour), and the temperature was 58°F. Prior to the derailment, a severe storm warning for this area had been in effect until May 19 at 3:00 a.m. Rainfall in the area before the accident totaled approximately 5 1/2 inches over a 10-day period that began May 9, 2018.

A preliminary investigation revealed an area in a curve where the subgrade fill was subsided from the track structure. The investigators found that this fill was subsided for about 26 feet (at a depth of 18 inches) at MP 102.9. (See figures 2 and 3.) The NTSB investigators also identified a flange mark traversing over the top of the rail head in the curve and the at the location of the subsided subgrade.



**Figure 2.** Ballast subsided from the outside edge of the cross-ties.



**Figure 3.** NTSB aerial drone photograph taken after freight cars were removed from main track one; ballast is subsided from outside edge of cross-ties.

Investigators accessed the lead locomotive and downloaded event recorder and video from the forward-facing video recorder. Based on the preliminary data from the event recorder, the train speed was about 38 mph at the time of the derailment.

The NTSB formed the following technical investigative working groups:

- Signal Systems
- Track and Engineering
- Mechanical/Equipment

Investigators inspected the track structure, the signal system, and the mechanical equipment. They are collecting and examining maintenance records. Investigators interviewed the CSX train crew and other CSX personnel. An NTSB aerial drone recorded the accident scene, especially the derailed equipment and the damaged bridge.

Parties to the investigation include the Federal Railroad Administration, the Virginia State Corporation Commission, CSX, and the Brotherhood of Maintenance of Way Employees Division.