

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



RRD23FR001

SECURITY CAMERA

Specialist's Factual Report

May 8, 2023

A. ACCIDENT SUMMARY

Location: Camden, New Jersey
Date: October 14, 2022
Time: 2121 eastern daylight time (EDT)
Vehicle: PATCO passenger train

B. SECURITY CAMERA SPECIALIST

Specialist: W. Deven Chen
Electrical Engineer - Recorder Specialist
National Transportation Safety Board (NTSB)

C. DETAILS OF THE INVESTIGATION

The NTSB Vehicle Recorder Division received the following two video files recorded from two security cameras installed in the vicinity of the accident site:

Video File #1: **9028 BFB Cmd S Strt Lvl Strs E-2022-10-14_21h15min34s000ms.mp4**

Video File #2: **9027 BFB Cmd N Strt Lvl Strs E-2022-10-14_21h19min50s000ms.mp4**

In agreement with the Investigator-In-Charge (IIC), a video group was not convened, and a summary report was prepared.

1.1 Security Camera Recording Description

No details were obtained regarding the make and model of the security camera system. The two video files were in .mp4 format and did not contain audio. They were with a resolution of 1920 x 1080 pixels and a frame rate of 15 frames per second (fps). Video file #1 had a duration of 5 minutes and 50 seconds, and video file #2 had a duration of 1 minute and 33 seconds.

1.2 Time Correlation

The filename of each of the two security video files contained the timestamp of the starting point of the video in the local time (EDT) of the accident. The timestamp was assumed to be consistent across both video tracks. With this information, the two videos were time correlated. Times are presented in EDT for the rest of this report.

D. SUMMARY OF THE SECURITY VIDEO FILES

The two security cameras were installed on the Benjamin Franklin Bridge. One camera was installed on the side of the Route 676 next to the rail track where the

accident occurred, and the other camera was installed on the opposite side of the Route 676. Figures 1 and 2 depict the field-of-view (FoV) of the two security cameras.



Figure 1. A screenshot of the field-of-view of the camera of the security video file #1 at 21:21:19.

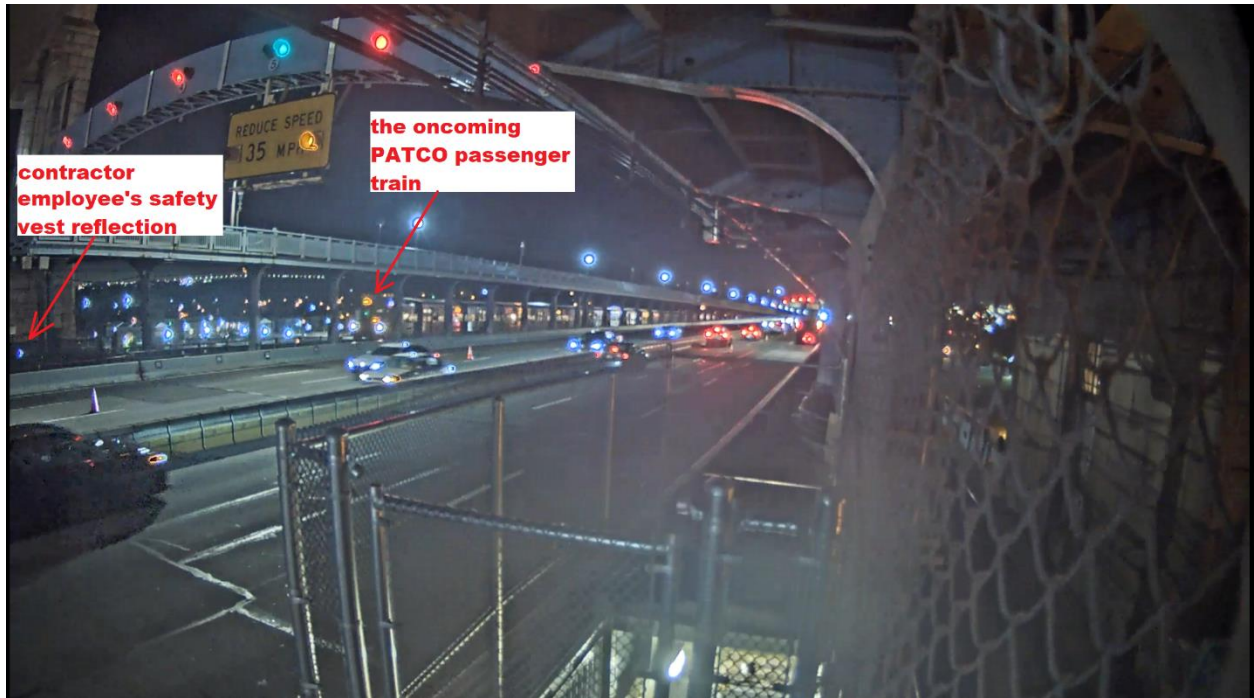


Figure 2. A screenshot of the field-of-view of the camera of the security video file #2 at 21:21:20.

The following table was created that shows key events from both video files.

Local Time (EDT)	Security Video File #1	Security Video File #2
21:15:34	This video file began.	
21:15:55	A truck carrying the two contractor employees pulled over to the side of the road. The truck was flashing amber lights.	
21:16:18	One contractor employee (CE1) got out of the truck from the front passenger seat side. He was wearing a yellow shirt with orange sleeves and a safety hat. After he got out of the truck, he appeared to be tying his shoes.	
21:16:28	The flashing amber lights went off, and the taillights of the truck went off as well.	
21:17:05	The other contractor employee (CE2) who was in the driver's seat of the truck came into view. He was wearing a yellow safety vest and a safety hat with a light on. He stopped at the back of the truck and appeared to be tying his shoes.	
21:17:48	CE2 walked from the back of the truck to the front and disappeared from the camera's view.	
21:18:00	CE1 walked toward the front of the truck and disappeared from the camera's view.	
21:18:12	CE1 reappeared in the camera's view and walked to the back of the truck. It appeared that he was getting something from the back of the truck.	
21:19:09	CE1 was putting on work gloves which he got from the back of the truck.	
21:19:28	CE1 walked toward the front of the truck and disappeared from the camera's view.	

Local Time (EDT)	Security Video File #1	Security Video File #2
21:19:42	CE1 and CE2 both reappeared in the camera view. They were both in the inner side of the roadside barrier. A metal barrier then blocked their path, they crossed over the roadside barrier to the outer side and continued walking down the road.	
21:19:50		This video file began.
21:19:55		The two contractor employees came into view. They were walking along the roadside barrier.
21:19:57	CE1 and CE2 crossed over the roadside barrier to the inner side. They then moved toward the rail track and disappeared from the camera's view. The rail track was blocked by some metal barriers from the camera's view.	The two contractor employees crossed over the roadside barrier and moved toward the rail track.
21:20:23		The two contractor employees crossed under a barrier onto the rail track and walked down the rail track. The one with a safety vest (CE2) was leading, and the one without (CE1) was following.
21:21:08		The PATCO passenger train came into view in the distance. The train was traveling in the same direction that the contractor employees were walking. The train was approaching them from behind.
21:21:19	The PATCO passenger train came into view.	
21:21:20		The train was running forward on the rail track. The reflection from the contractor employee's safety vest suggested the contractor employees were on the rail track. There were vehicles traveling on the Route 676 next to the rail track.

Local Time (EDT)	Security Video File #1	Security Video File #2
21:21:23		The movement of the safety vest's reflection indicated that the collision occurred. Prior to the collision, no reduction of the train's speed was apparent. The video file ended.
21:21:24	The train came to a full stop, and the video file ended.	

Submitted by:

W. Deven Chen
 Electrical Engineer - Recorder Specialist