

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division

September 30, 2022

Security Video

Specialist's Factual Report

By Kyle Garner

1. ACCIDENT

Location: Bedford, New Hampshire
Date: December 10, 2021
Airplane: Swearingen SA-226AT
Registration: N54GP
Operator: Castle Aviation Inc
NTSB Number: ERA22FA086

2. GROUP

A group was not convened.

3. DETAILS OF INVESTIGATION

The National Transportation Safety Board (NTSB) Vehicle Recorder Division received video files from home security cameras near the end of the accident airplane's flight path. The video files were downloaded by non-NTSB personnel and forwarded via a file share service to the NTSB.

3.1 Video Information

Figure 1 is a Google Earth¹ overview of the location of the security cameras, Manchester-Boston Regional Airport (MHT), the accident airplane's flight path from available ADS-B data, and the approximate location of the wreckage.

¹The weather and lighting conditions in the Google Earth overview are not necessarily indicative of the weather and lighting conditions at the time of the event.

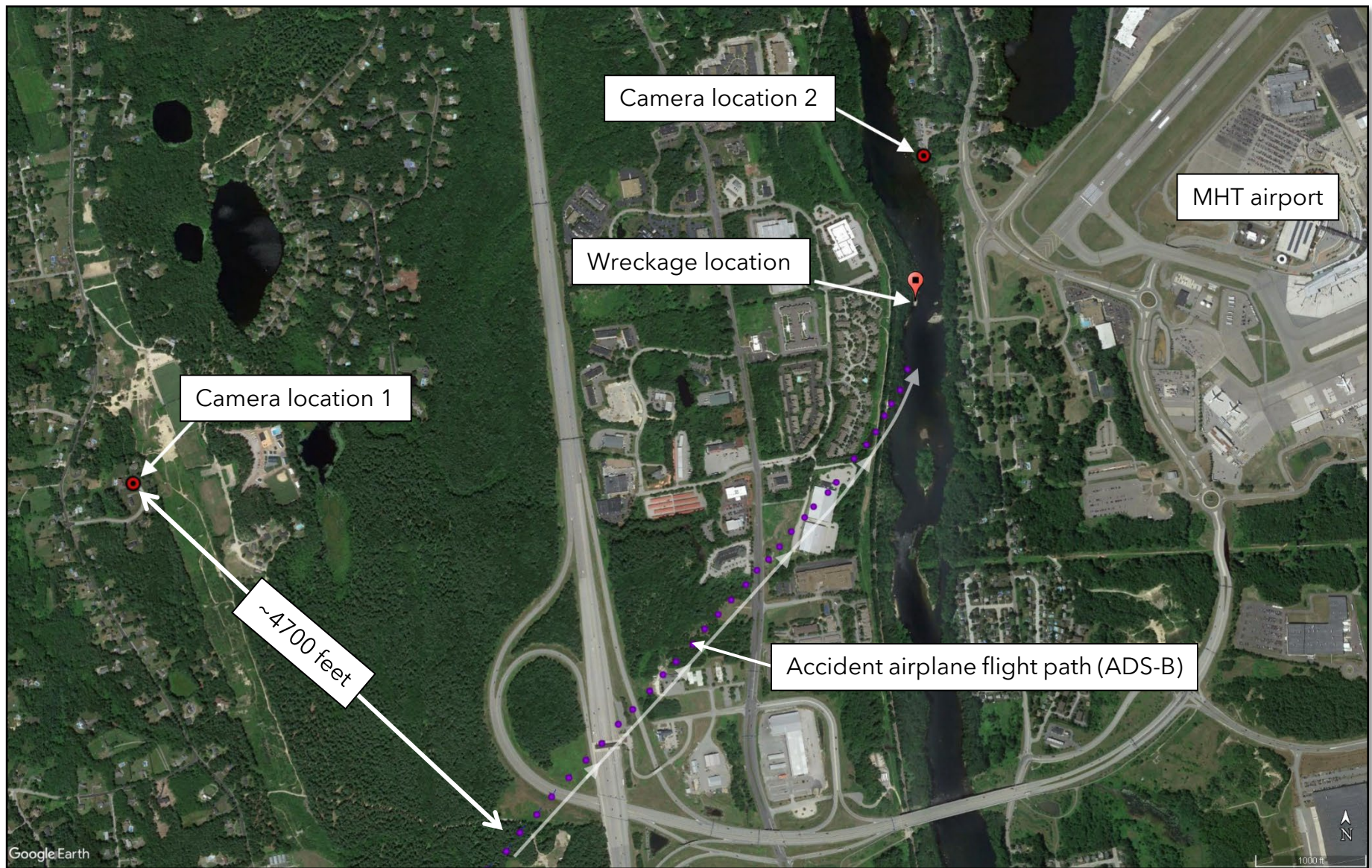


Figure 1. Google Earth overview of camera locations, accident flight path, and wreckage location.

3.2 Camera Location 1 - Summary

One video was provided from camera location 1, which was located about 1.4 miles west of the wreckage location. The video was from an outdoor security camera that faced toward the southeast and captured a portion of the accident airplane's approach to runway 6 at MHT.

The video, in MOV format, was eight minutes and eight seconds in duration and had a resolution of 1920 by 1080 pixels. The video file also included audio recorded at a rate of 11,025 Hertz (Hz)².

Time in the summary is given as video elapsed time, or time since the beginning of the recording, unless otherwise noted.

Video Summary:

For the duration of the video, the lighting conditions were dark. A flashing light from a nearby radio tower was noted in the upper-right portion of the video. A steady light from an unknown nearby building was noted in the upper-left portion of the video. The first frame of the video is shown in Figure 2.

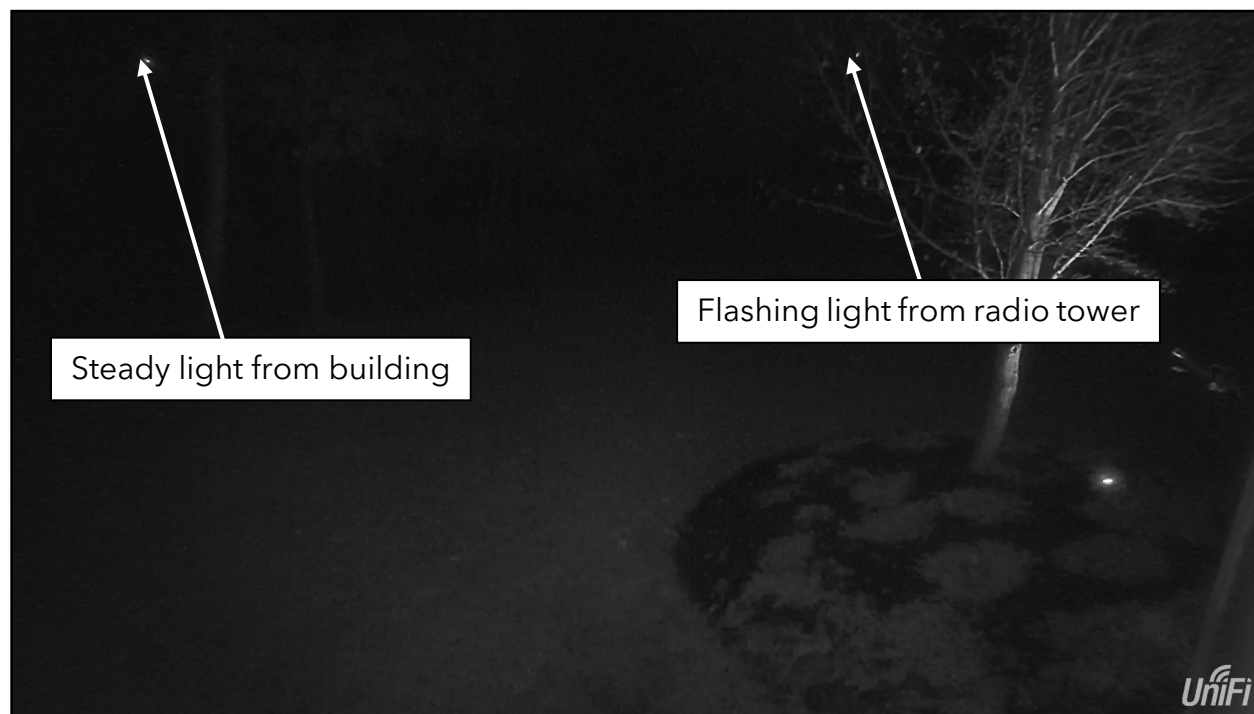


Figure 2. First video frame from camera location 1.

The first three minutes of the video were uneventful. At 03:01, engine sounds consistent with the accident airplane were noted,

² For details about information recovered from the audio of this video file, refer to the *Sound Spectrum Study - Specialist's Study Report*, which is available in the docket for this accident.

however, the airplane was not visible. Navigation lights from the accident airplane were briefly visible near the steady light from the nearby building at 03:38. Engine sounds consistent with the accident airplane were no longer audible after about 03:45. The remainder of the video was uneventful. At 08:08, the video ended.

3.3 Camera Location 2 - Summary

Two videos were provided from camera location 2, which was located about 1400 feet north of the wreckage location. The videos were from two indoor outward-facing security cameras that faced toward the south and captured the accident airplane impacting the ground.

The videos, in MP4 format, were about four minutes in duration and had a resolution of 1920 x 1080 pixels. The video files also included audio recorded at a rate of 44,100 Hz. Both videos contained similar information, thus, only one of the videos was used for the summary below.

Time in the summary is given as video elapsed time, or time since the beginning of the recording, unless otherwise noted.

Video Summary:

For the duration of the video, the lighting conditions were dark. The camera was located inside the residence facing outward toward a patio. The Merrimack River was visible. Lights from residences on the other side of the Merrimack River were also visible in the distance.

At 00:12, landing lights from an airplane were first visible in the distance. From 00:12 to 00:48, the airplane was traveling toward the camera. At 00:49, the landing lights from the airplane were obstructed by trees in the distance. At 00:56, the landing lights reappeared. The airplane appeared to be in a descending left bank. At 01:00 a large explosion was noted. At 04:02, the video ended.