

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



ERA22FA161

SECURITY CAMERA RECORDING

Specialist's Study

September 26, 2022

A. ACCIDENT

Location: Dahlgonega, GA
Date: March 19, 2022
Time: 1852 eastern daylight time (EDT)
Airplane: Cessna 172H; N1410F

B. DETAILS OF THE INVESTIGATION

The NTSB Vehicle Recorder Division received the following video file:

Image/Video File #1: Firstname_Lastname_Video.mov¹

In agreement with the Investigator-In-Charge, digital enhancements of the video file were conducted, and a summary report was prepared.

1.0 Image/Video File(s) Information

The accident recording was made at a resolution of 928x480 pixels at a frame rate of 15 frames per second (fps). The field of view is represented in figure 1 below, which is an exported frame from the provided video.

Figure 1. Image showing camera view.



¹ The video file transmitted contained the first name and last name of the person who provided the recording. This information was redacted for this report.

2.0 Timing and Correlation

A time correlation of the security camera recording was not conducted, instead, the times in the report are presented in video elapsed time from the start of the recording. The times are given in the format SS:FF, where SS stands for the number of elapsed seconds, and FF, the number of elapsed frames in a 15 fps timeline.

3.0 Summary of Recording Contents

The recording shows a portion of a taxiway and a portion of the runway in which the aircraft attempted to land. At 21:10, the accident aircraft comes into the field of view from the right of the image. By 23:12, the aircraft was approximately centered in the field of view. By 25:00, the accident aircraft had crossed out of the field of view to the left of the image.

A variety of digital enhancements in a non-linear video editor were used in an attempt to both clarify the recording and potentially determine if the aircraft bounced. The enhancements resulted in the following attachments to this report. A summary of the enhancements is listed below along with the attachment number and file name.

Attachment 1 - Firstname_Lastname_video.mov

This is the file that was provided to the NTSB without any enhancements.

Attachment 2 - ERA22FA161_Cropped_Centered_FullSpeed.mp4

This version of the video contains both a scale and position filter which increases the size of the accident aircraft in the recording. Additional elements of position filter were set to attempt to align the accident aircraft in the center of the image. A sharpen filter and a gaussian blur filter were applied in that order.

Attachment 3 - ERA22FA161_Cropped_Centered_25PercentSpeed.mp4

This version contains the same filter elements as described in attachment 2. The playback speed had been decreased to 25 percent of the original recording. The mechanism used to decrease the playback speed may either drop frames, or in some instances, create frames through an interpolation process. No frame analysis was conducted.

Attachment 4 - ERA22FA161_Scrubbed_Screen_Recording.mp4

This version contains the same filter elements as described in attachment 2. The playback speed was manually manipulated in the non-linear video editor in an attempt to better understand the accident aircraft's motion. This video file was created using a screen capture software and may result in a degradation of quality from the original recording.

Attachment 4 gives an enhanced view of the aircraft's motion in the vicinity of the runway. The frame counter in the left of the recording (in blue) is used to reference time in this particular file. Throughout the recording, the aircraft seems to exhibit a slightly left-wing low roll attitude. Around frame 17 elapsed, the motion of the wing suggests the aircraft may have contacted the runway. Shortly after, around frame 25 elapsed, the wing exhibits a similar roll motion. This may suggest the aircraft could have contacted the runway again.

Submitted by:

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