

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division
Washington, D.C. 20594

October 17, 2012

17 - Video Factual Report

**Specialist's Factual Report
by Bill Tuccio**

A. EVENT

Location: Scottsdale, Arizona
Date: July 9, 2012
Aircraft: Mooney M20L
Registration: N137MP
Operator: Private
NTSB Number: WPR12FA297

B. GROUP - No Group

C. SUMMARY

On July 9, 2012, about 0930 mountain standard time, a Mooney M20L, N137MP, was substantially damaged when it experienced a hard landing followed by a loss of aircraft control at Scottsdale Airport, Scottsdale, Arizona. The flight instructor was seriously injured, and the pilot receiving instruction received minor injuries. The airplane was being operated by the pilot/owner under the provisions of 14 Code of Federal Regulations Part 91. A flight plan had not been filed for the local instructional flight, which had originated about 1 hour before the accident. Visual meteorological conditions prevailed at the time of the accident.

D. DETAILS OF INVESTIGATION

On August 14, 2012, the NTSB Vehicle Recorder Laboratory received two videos: (1) a FBO security video, and (2) a video recorded by the tower.

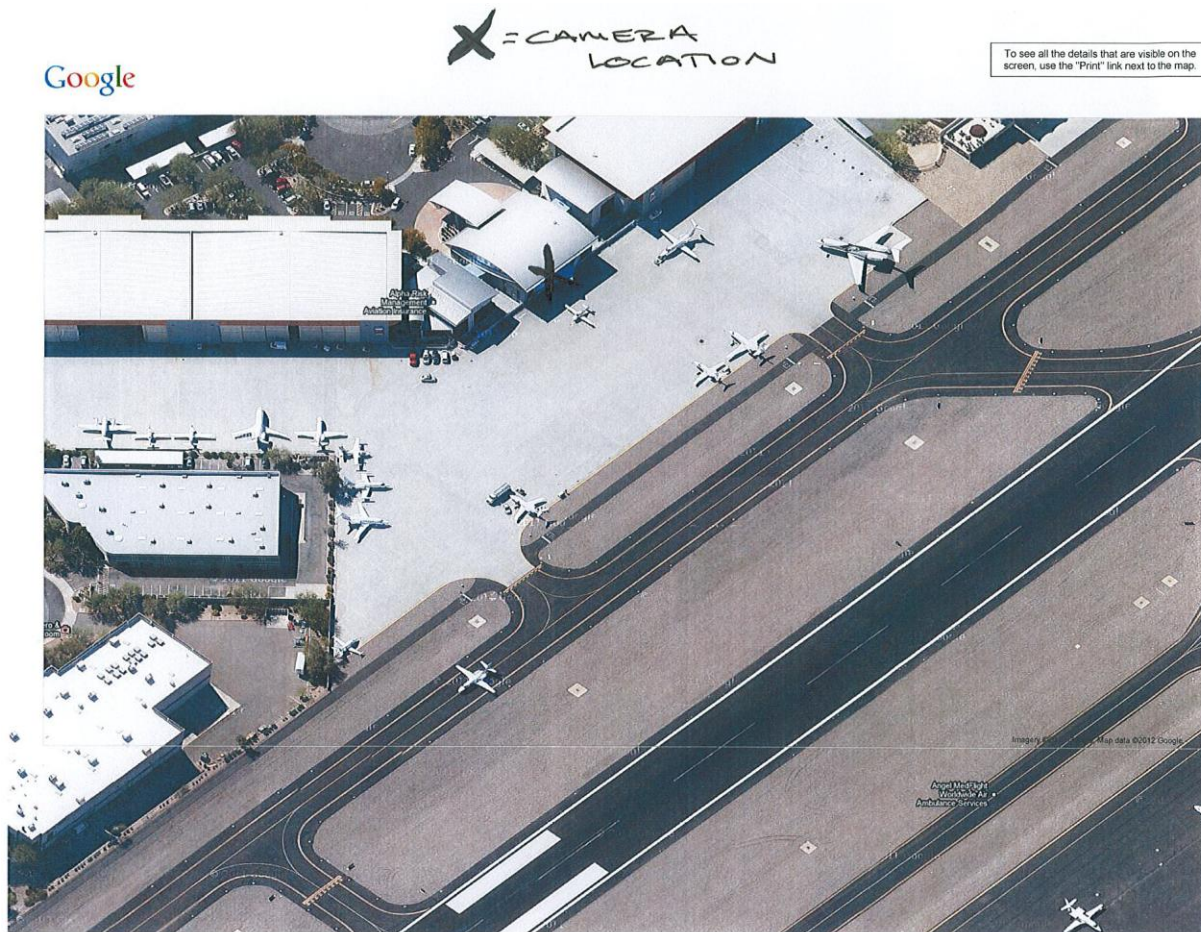
FBO Security Video

The FBO security video was taken by a Speco Technologies recording system. The video was provided in a proprietary format ("DRV"). The video was viewed using the Speco Technologies "specoPlayer" which allowed frame-by-frame viewing and capture. Review of the video time stamps versus frame count suggested the frame rate

available for this report was variable and was between 3 and 5 frames per second. No effort was made to verify the accuracy of the time stamps recorded on the video.

According to the investigator-in-charge, the security video camera location is as shown in figure 1. The camera was reported to be about 15 feet above the ground. The camera was located about 525 feet from the edge of the only runway on the airport, runway 3-21. The camera is facing northwesterly.

Figure 1. Approximate location of FBO security video camera.



Tower Video

The tower video was taken by an unknown system. The video was provided in Windows "AVI" format.

FBO Security Video Description

The relevant portion of the FBO security video was extracted into still images from video reported timestamps of 9:17:03 to 9:17:19. These images are included in Attachment 1 to this report, each image labeled as snapshot 1 through 65.

The image shown in figure 2 is a time-lapse representation of 17 frames captured by the security video. Figure 2 covers the video reported timestamps from 09:17:08 to 09:17:16 (snapshots 21 through 51 from Attachment 1). Figure 2 contains 17 total frames: the odd-numbered labeled frames from Attachment 1, plus 1 even-numbered labeled frame (snapshot 48) annotated with an arrow. The image under the arrow, snapshot 48, corresponds to a video reported timestamp of 09:17:14.

The time-lapse sequence shows a side view of the aircraft accident sequence in the vicinity of runway 21. The frames in Figure 2 show the aircraft moving from right to left in the time-lapse representation. As the accident sequence progresses, the aircraft bank angle progressively increases. The left wing impacts the ground at about the location shown by the arrow in Figure 2 (snapshot 48).

Tower Video Description

The relevant portion of the Tower video was extracted into still images. These images are included in Attachment 2 to this report, each image labeled as snapshot 1 through 5.

The image shown in figure 3 is a time-lapse representation of 5 consecutive frames captured by the security video. Due to the low quality of the video images, figure 3 is annotated to show the location of the images of the accident sequence as well as the directionality. The rectangle highlights the aircraft in the video. The curved arrow indicates directionality.

Figure 3 shows the aircraft lateral path deviated to the left, south of the runway, during the accident sequence. The aircraft came to rest in the grass, near the taxiway paralleling the runway.

Figure 2. FBO security video - time-lapse view of accident sequence (annotated).



Figure 3. Tower video - time-lapse view of accident sequence (annotated).

