

American Airlines Flight 587
Belle Harbor, New York
November 12, 2001

Animations and Videos from Public Hearing **October 29-November 1, 2001**

Animations and videos are provided in wmv format and were presented at the Public Hearing on October 29-November 1, 2002 in Washington, D.C.

An expanded version of these presentations is available on 1 CD-ROM or on 3 separate VHS videotapes upon request form NTSB Public Inquiries Branch.

Disclaimer: Simulations presented below used scene surveys, vehicle and scene testing, vehicle operating characteristics, pictures and witness statements. The depictions do not represent actual lighting and weather conditions at the time of the accident.



Takeoff View from Construction Site [645 KB]
[Windows Media Format - requires *Media Player*]

This is a video taken from a construction site located at JFK International Airport. The accident airplane can be seen on the runway prior to takeoff. A brief portion of both the takeoff roll and the initial climbout can be seen separately in the video. The video stops after the initial climbout, and then resumes at some time after the accident has occurred. After the accident, the camera view briefly shows black smoke rising up from the horizon. *NOTE: the time shown imprinted in the lower left corner of the video is not the actual time of day.*



Toll Booth View [4.32 MB]
[Windows Media Format - requires *Media Player*]

This is a collection of video recordings captured by a security system that was operated by the Triborough Bridge and Tunnel Authority in New York, NY. This video contains views from three separate cameras located at the northwest end of the Marine Parkway Bridge.

- In the first view, the airplane can be seen as a small 'dot' moving from left to right across the screen (a white circle has been added to the video to highlight the position of the airplane) until it is obscured by a building in the foreground. Just before the airplane is obscured in the first view, it appears in the second view, which is displayed as an inset in the lower right corner of the screen.
- In this second view, the airplane can be seen emerging from the left side of the view from behind a wall, again as a small 'dot'. The airplane travels from the upper left portion of the view toward the lower right. As the airplane moves downward, a 'streak' can be seen trailing behind it during a portion of this view. Just after the airplane descends behind a building in this second view, the video from the third camera is displayed in the background.
- In this third view, the airplane is not visible, however smoke can be seen rising up from the horizon in the top center area of the view.

NOTE: The times seen in each of these views is provided by a clock that is part of the video security system. This clock differs from the one used to align the various recorded data sets for this investigation. For more information about this video, see Exhibit 17A - Video Study.



Accident Reconstruction[4.79 MB]

[Windows Media Format - requires *Media Player*]

This three-dimensional animated accident reconstruction shows most of the flight for American Airlines Flight 587, which crashed shortly after takeoff from JFK International airport on November 12, 2001. The reconstruction exhibits information selected from the Flight Data Recorder, excerpts from the Cockpit Voice Recorder transcript, recorded radar data and aircraft performance data. This reconstruction does not depict the weather or visibility conditions at the time of the accident.

The animation shows a three-dimensional model of the airplane and its motion in the upper portion of the view. Selected comments from the Cockpit Voice Recorder transcript or other annotations are superimposed as text in this area at the time they occurred.

The lower portion of the view depicts a set of instruments and indicators, which display selected parameters from the flight data recorder. From left to right these are:

- Attitude indicator showing pitch and roll attitude, control wheel/column icon depicting the control wheel (rotating right or left) and control column (moving up or down) inputs, and an indicator showing vertical acceleration.
- The next box to the right depicts the data from the rudder pedal, rudder control surface, and the lateral acceleration parameters.
- The last box shows a representation of the tail section as viewed from above and depicts the rudder control surface position relative to the vertical stabilizer. The red bars on the rudder pedal, rudder surface, and tail section indicators represent the relative position of the rudder limiting system. Additionally, the time of day (based on the FAA's Air Traffic Control clock), Altitude in feet, and Airspeed in knots are depicted at text.

The animation starts with the airplane on the ground, taxiing to runway 31L. It shows the airplane's taxi, takeoff, climbout, and initial turn to the left. The rudder parameters are blanked out at the time the tail section separates from the airplane. The screen turns black at the point in time when the Flight Data Recorder information ends (only CVR text or annotations are shown after this point).