

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN25FA019

AIR TRAFFIC CONTROL

Specialist's Services Review

February 26, 2026



National Transportation Safety Board

Office of Aviation Safety / Operational Factors Division (AS-30)

ATC Services Review Worksheet

Date of Event (UTC) Oct 20, 2024	Review Date Jan 29, 2026
Time of Event (UTC) 0051 UTC	Time of Event (LCL) 1951 CDT
Investigation Number CEN25FA019	Keys Number 195349
☒ CHART ☐ AIRFIELD ☐ SIAP/SID/STAR	

A review of the ATC services provided in the above incident/accident was conducted by an ATC Investigator. Investigative work was limited to a review of the factual data collected over the course of the investigation and consideration of the current rules, regulations, and procedural guidance current at the time. The ATC investigator did not travel to the scene, nor to any ATC facilities in support of this investigation. Additionally, the ATC investigator did not conduct any personnel interviews, and all investigative work was conducted from their assigned office.

ATC Investigator: Ruth Rupnik, ATC Accident Investigator

☒ SRT RELEASE APPROVED

Involved ATC Facilities:	Facility 1: HOU ATCT	Facility 2:	Facility 3:	Facility 4:
Involved Aircraft:	Aircraft 1: N881KE	Aircraft 2:	Aircraft 3:	Aircraft 4:

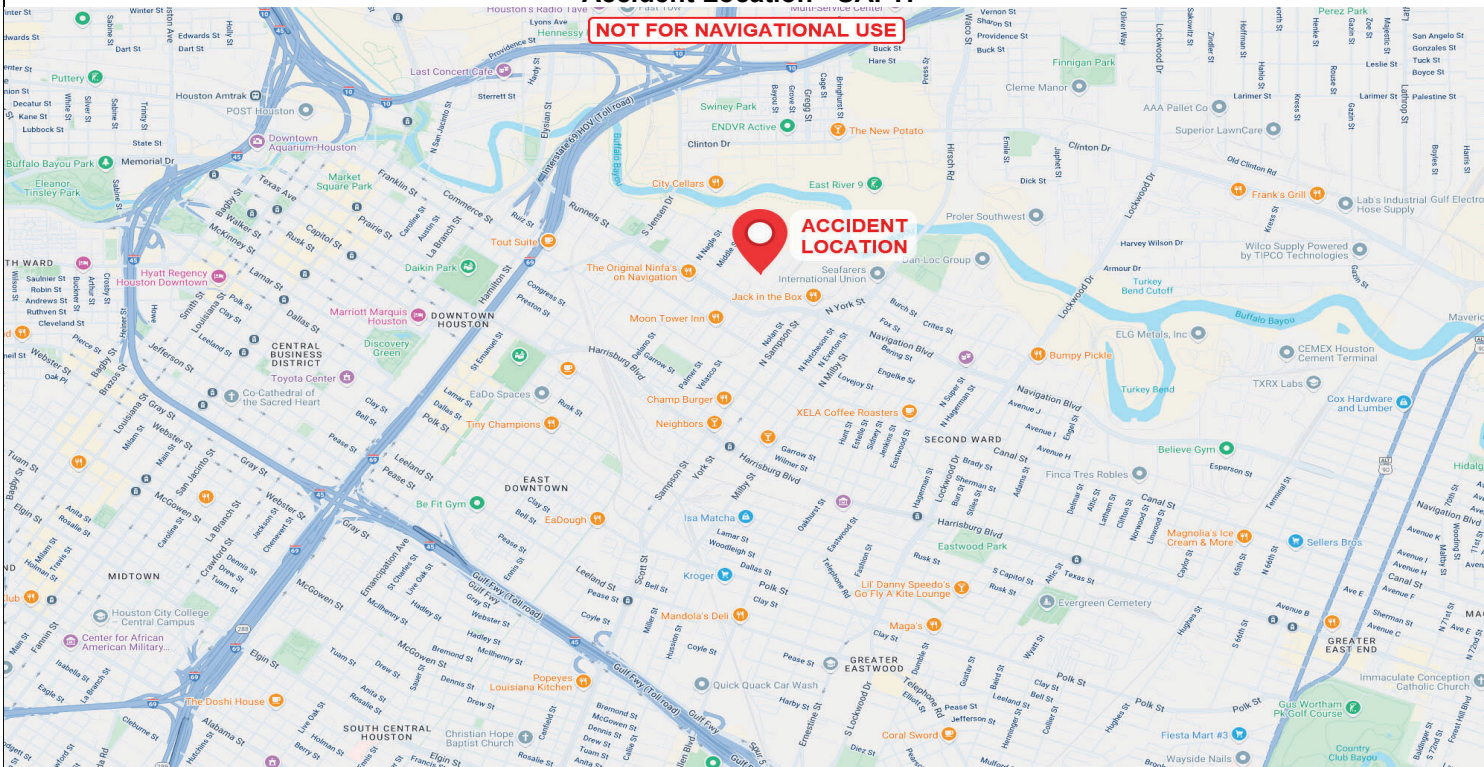
☒ Data Requested	☒ NOTAM Issues	Surveillance Data Source	Audio Data Source
☒ ATC Procedures	☐ Safety Improvements	FAA ADS-B Data	FAA Certified Audio

PRELIM Summary Information - SAFTI

On October 20, 2024, about 1951 central daylight time, a Robinson R44 helicopter, N881KE, was destroyed when it impacted a radio tower near Houston, Texas. The pilot and three passengers sustained fatal injuries. The helicopter was operated as a 14 Code of Federal Regulations (CFR) Part 91 revenue sightseeing flight.

Accident Location - SAFTI

NOT FOR NAVIGATIONAL USE



ATC Service Review Summary

Air Traffic Control (ATC) services were provided by Houston Airport Traffic Control Tower (HOU ATCT). A thorough review of certified data provided by the FAA and HOU ATCT was conducted and ATC Services Review completed at the request of the IIC. A FALCON Replay, FAA certified audio, ADS-B data, mandatory occurrence report (MOR), accident documentation, and SRT findings provided by the FAA were used to conduct this review.

According to ADS-B data, N811KE departed Houston Ellington Airport (EFD). They contacted HOU ATCT and requested the "downtown loop". This is neither a standard or published route, but rather a generalized term used by some local helicopter pilots requesting to operate around the downtown area. The HOU ATCT local controller (LC) radar identified the helicopter, approved the request, and issued the HOU altimeter.

N1KE flew northbound past HOU, then NW towards downtown Houston, remaining below 1000' above ground level (agl). According to certified ATC audio recordings, the LC controller issued traffic advisories to N881KE and another helicopter in the vicinity, as required by FAA Order JO 7110.65, Air Traffic Control. However, the LC controller did not receive acknowledgment of visual acquisition from the pilot of N881KE before instructing them to maintain visual separation from the traffic, as also required by the 7110.65.

The LC controller did not issue a safety alert for the radio tower along the helicopter's projected route of flight.

Information about the radio tower, as well as pertinent notice to airmen (NOTAM) information, are included in the 'Pertinent NOTAM Information' section of this review.

While acknowledging the instruction to maintain visual separation, the helicopter pilot's transmission abruptly ended. A HOU ATCT operations supervisor (OS) who was in the tower and witnessed the accident notified first responders, search and rescue, and conducted upward reporting as required by local and national orders.

The accident aircraft had requested to transition the class B airspace, but did not request MSAW alerts.

A VFR aircraft is required to request altitude alerts specifically. The controller would make a keyboard entry that would turn on the MSAW processing on the control tower radar display (CTRD). MSAW alerts are disabled on VFR aircraft by default, as it is prone to create nuisance alarms, especially with helicopters flying low altitude routes. This would not preclude the issuance of safety alerts, which are required IF the controller is AWARE that a situation exists that in THEIR JUDGMENT places them in proximity to an unsafe situation (ie, obstructions). Ultimately, VFR pilots have the responsibility to maintain clearance from terrain and obstacles, even when receiving ATC services.

An ATC investigator did not launch on this accident and did not conduct on-site work or interviews with ATC personnel or staff.

ATC Supporting Data

1. FAA Certified ATC audio recordings
2. FAA ADS-B data
3. FAA Aircraft Accident Package
4. FAA Services Rendered TELCON (SRT) preliminary findings
5. HOU ATCT standard operating procedures (SOP)
6. HOU-I90 Letter of Agreement (LOA)
7. FAA Order JO 7110.65AA, Air Traffic Control
8. FAA Aeronautical Information Manual (AIM)

ATC Procedural References

FAA Order JO 7110.65AA, Air Traffic Control stated in part:

PARAGRAPH 2-1-1. ATC SERVICE

- a. The primary purpose of the ATC system is to prevent a collision involving aircraft operating in the system.
- b. In addition to its primary purpose, the ATC system also:
 1. Provides a safe, orderly, and expeditious flow of air traffic.
 2. Supports National Security and Homeland Defense missions.

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c. The ATC system must provide certain additional services to the extent permitted. The provision of additional services is not optional on the part of the controller, but rather required when the work situation permits. It is recognized that the provision of these services may be precluded by various factors, including, but not limited to:

1. Volume of traffic.
2. Frequency congestion.
3. Quality of surveillance.
4. Controller workload.
5. Higher priority duties.
6. The physical inability to scan and detect situations falling in this category.

PARAGRAPH 2-1-2. DUTY PRIORITY

a. Give first priority to separating aircraft and issuing safety alerts as required in this order. Good judgment must be used in prioritizing all other provisions of this order based on the requirements of the situation at hand.

NOTE - Because there are many variables involved, it is virtually impossible to develop a standard list of duty priorities that would apply uniformly to every conceivable situation. Each set of circumstances must be evaluated on its own merit, and when more than one action is required, controllers must exercise their best judgment based on the facts and circumstances known to them. That action which is most critical from a safety standpoint is performed first.

PARAGRAPH 2-1-6. SAFETY ALERT

a. Terrain/Obstruction Alert. Immediately issue/initiate an alert to an aircraft if you are aware the aircraft is at an altitude that, in your judgment, places it in unsafe proximity to terrain and/or obstructions. Issue the alert as follows: PHRASEOLOGY- LOW ALTITUDE ALERT (call sign), CHECK YOUR ALTITUDE IMMEDIATELY.

PARAGRAPH 7-2-1. VISUAL SEPARATION

2. Pilot-applied visual separation.

- (a) Maintain communication with at least one of the aircraft involved and ensure there is an ability to communicate with the other aircraft.
- (b) The pilot sees another aircraft and is instructed to maintain visual separation from the aircraft as follows:
 - (1) Tell the pilot about the other aircraft. Include position, direction, type, and, unless it is obvious, the other aircraft's intention.
 - (2) Obtain acknowledgment from the pilot that the other aircraft is in sight.
 - (3) Instruct the pilot to maintain visual separation from that aircraft.

PARAGRAPH 7-6-1. APPLICATION

a. Basic radar services for VFR aircraft must include:

1. Safety alerts.
2. Traffic advisories.
3. Limited radar vectoring when requested by the pilot.
4. Sequencing at locations where procedures have been established for this purpose and/or when covered by an LOA.

Aeronautical Information Manual (AIM) - This manual is designed to provide the aviation community with basic flight information and ATC procedures for use in the National Airspace System (NAS) of the United States.

The letter of agreement (LOA) between Houston TRACON (I90) and HOU ATCT stated in part:

HOU is authorized use of I90 Airspace depicted in Area B, Appendix 5. If I90 desires to use this airspace, coordination with HOU must be required. If I90 has traffic below 1500 feet within the lateral confines of airspace depicted in Area B, Appendix 5 they must force the target onto Hobby Local (40) display (see figure 3).

FAA SRT Findings - Released

NOTE: SRT FINDINGS ARE PRELIMINARY INFORMATION AND MAY CONTAIN INFORMATION THAT WAS CORRECTED LATER AFTER FURTHER REVIEW OF INFORMATION

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An SRT was conducted on 10-21-2024 and these were the main findings of the SRT:

- The ATM described the traffic volume as light with routine complexity. The weather was VFR with wind 130 at 6 knots, 10 miles of visibility, and a few clouds at 4,000 feet. There were no unusual factors that would cause a distraction.
- There were four CPCs, two trainees, and one OS on duty. Four positions were open with two CPCs, one trainee, and one OS on position. Two CPCs and one trainee were available. The OS was providing direct supervision. The position configuration was normal for the time of day and volume of traffic.
- N881KE departed the Ellington (EFD) Airport, TX, established communication with the HOU Local Controller (LC), and requested a "downtown loop," which was approved by the controller.
- N881KE was approximately seven miles north-northwest of HOU when the controller issued traffic to N233JD/R44, VFR, reference N881KE.
- The controller issued a traffic advisory to N881KE and instructed them to maintain visual separation from the other helicopter.
- N881KE was reading the instructions back when their radio transmission cut out unexpectedly.
- N233JD reported N881KE had struck a tower and fell to the ground.
- An ALNOT was issued, and the Houston Police Department was informed, which dispatched a helicopter to the scene and told HOU that emergency personnel were enroute.
- The tower struck had an active NOTAM for an obstruction tower light being out of service.

FAA Certified ADS-B Data

The below information and included graphics were developed using certified Automatic Dependent Surveillance - Broadcast (ADS-B) data provided by the FAA. These data are direct source data that has extracted and exported by the FAA's Office of Accident Investigation and Prevention (AVP-100) using the SBS Analysis Tool (SAT). A surveillance system in which an aircraft or vehicle to be detected is fitted with cooperative equipment in the form of a data link transmitter. The aircraft or vehicle periodically broadcasts its GPS-derived position and other information such as velocity over the data link, which is received by a ground-based transmitter/receiver (transceiver) for processing and display at an air traffic control facility. ADS-B data is subject to coverage limitations like any other system that relies on line-of-sight signal transmission, so there can be portions of a flight track that are unavailable, or will have to be combined with other source data for the most complete flight track.

Pertinent NOTAM Information

!HOU 10/073 HOU OBST TOWER LGT (ASR 1052552) 294527.00N0952020.00W (7.4NM NNW HOU) 1033.8FT (999.0FT AGL) U/S 2410170444-2410312359

Additional information:

In an email dated October 29, 2024, the owner of the tower explained that the company posted a NOTAM while integrating the site into their Network Operations Center (NOC). The incident report showed "all lights out" awaiting delivery to the NOC. The NOC uses "All lights out" when a site is not communicating with the NOC, and they do not have the ability to electronically monitor the lighting. (Source: Operations factual report and email correspondence with SBA Communications Corporation.)

Flight Track Information

ADS-B track data provided by the FAA indicated the accident helicopter departed from the ramp area west of the runways at Houston Ellington Airport (EFD), Houston, TX at about 1942 CDT. The track then indicates a left turn out to a northwesterly heading. Altitude information shows that the helicopter remained below 1,000 feet for the entire flight. Track data was lost at about 1951 CDT, and the last data point was located approximately coincident with the reported accident location.

ATC Communications

This is a summary of the communications between N881KE and HOU ATCT. All times are in central daylight time (CDT) and altitudes in feet above mean sea level (msl).

1943 N881KE first contacted HOU ATCT six miles east of the HOU airport and requested a downtown loop at 600 feet and in receipt of Automated Terminal Information Service (ATIS) Juliet.

1944 The LC controller asked N881KE if they were out of Houston Ellington Airport (EFD). N881KE confirmed they were. The LC controller acknowledged, radar identified and cleared N881KE into the airspace as requested and provided the HOU altimeter of 30.24. The pilot acknowledged.

1950 The LC controller advised N881KE of helicopter traffic at their nine to ten o'clock, two miles, northbound at 700 feet that had them insight. The pilot acknowledged and advised that while they could identify the traffic on their ADS-B, they had not yet acquired the traffic visually and that they were searching. The LC controller instructed N881KE to maintain visual separation from the traffic.

The pilot of N881KE was acknowledging when the broadcast terminated unexpectedly. The pilot of another helicopter that was on frequency advised the LC controller that N881KE had hit a tower and crashed. There were no further recorded communications between N881KE and HOU ATCT.

Included Figures

Figure 1: Overhead view of N881KE entire flight track

Figure 2: Profile view of the final segment of N881KE flight track

Figure 3: Graphic from I90 TRACON / HOU ATCT LOA depicting helicopter airspace between HOU and IAH

Docket Attachments

Attachment 1: FAA Certified ATC Audio Recordings

Attachment 2: FAA ADS-B Data

Attachment 3: FAA Aircraft Accident Package

Attachment 4: HOU ATCT Standard Operating Procedures (SOP)

Attachment 5: HOU-I90 Letter of Agreement (LOA)

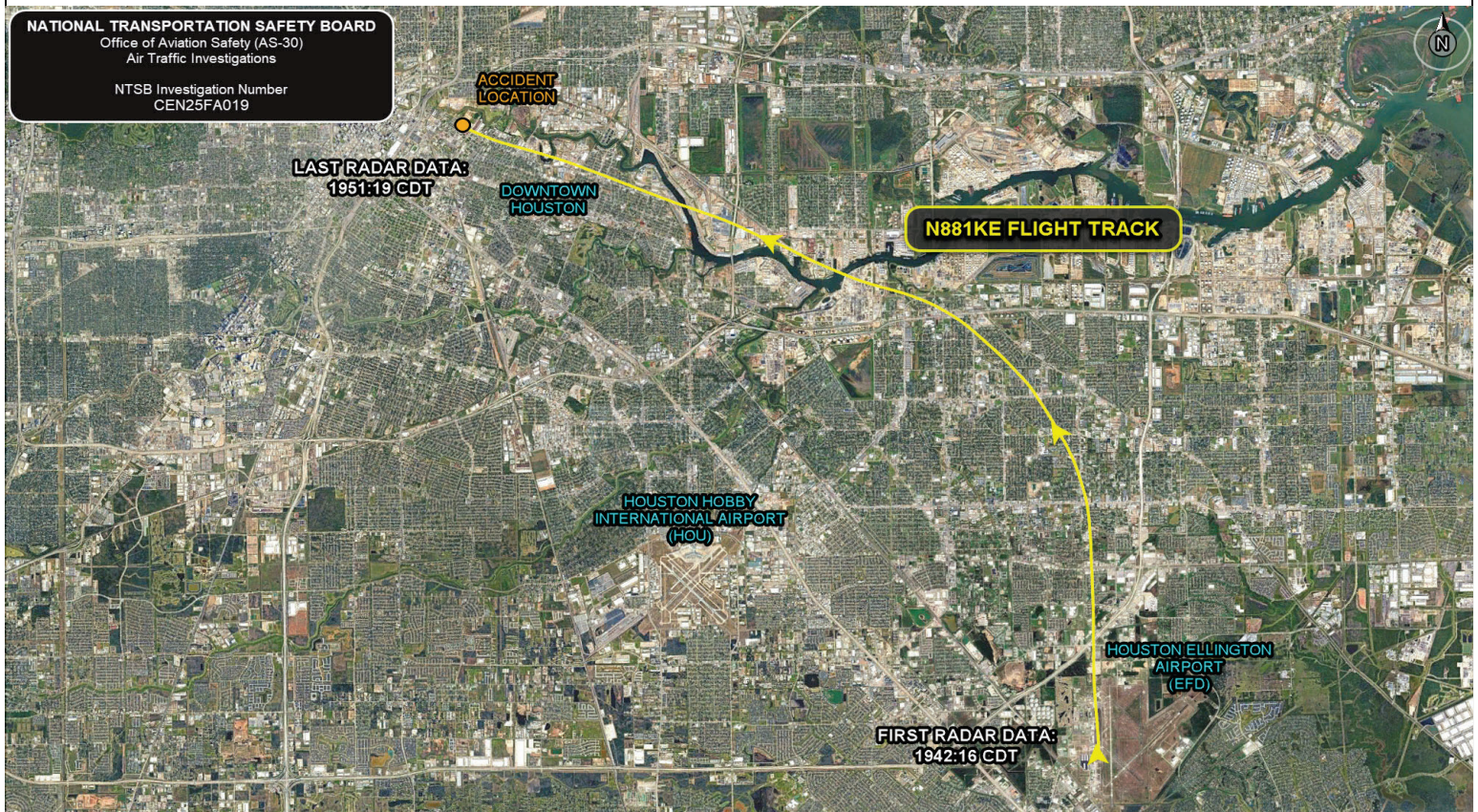
AERONAUTICAL CHART EXCERPT

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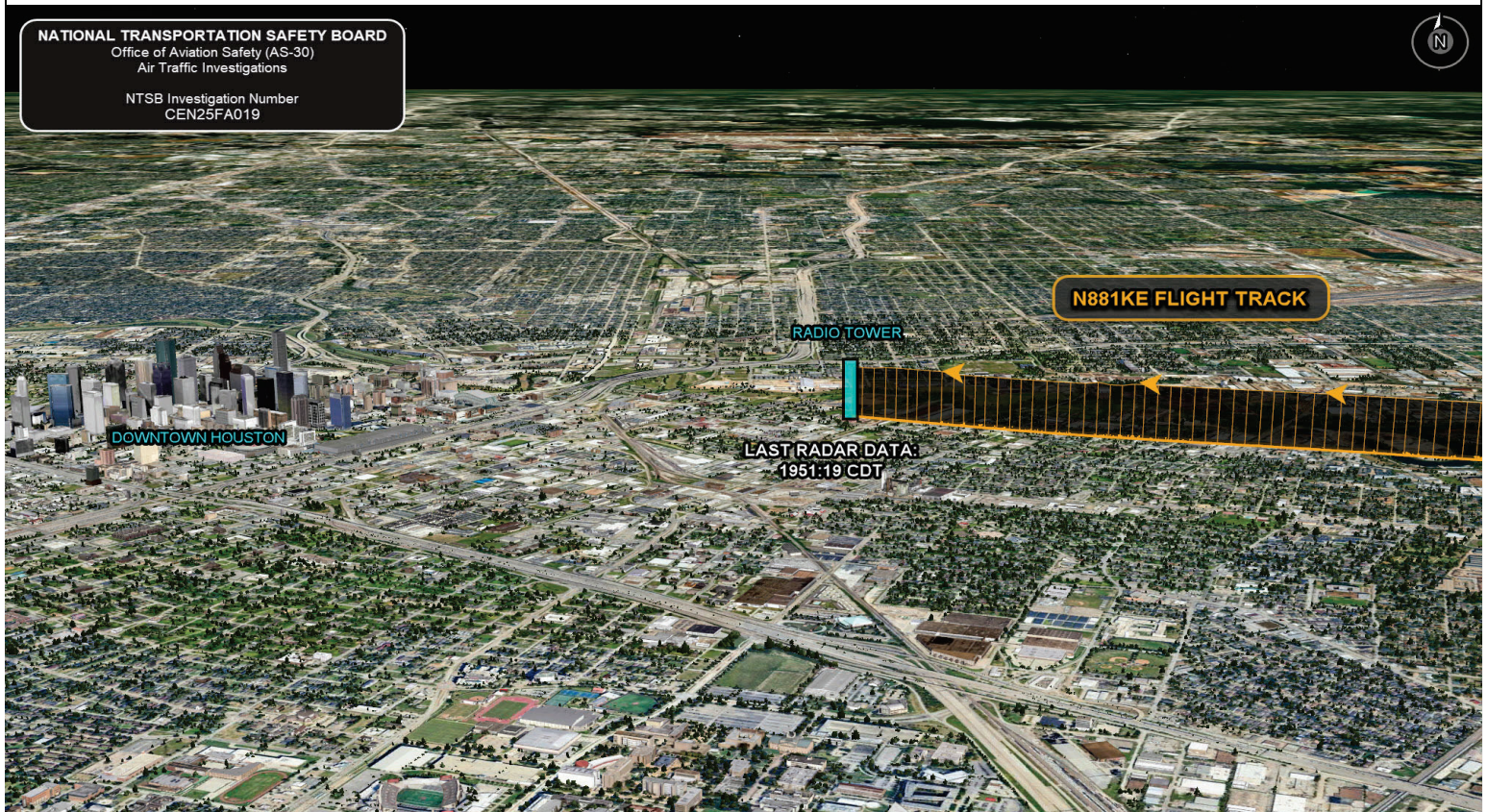
Figure 1



Caption: Overhead view N881KE entire flight track.

ADD

Figure 2



Caption: Profile view of the final segment of N881KE flight track.

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